NYSE Pillar Gateway
FIX
Protocol Specification

NYSE

NYSE Arca Equities

NYSE American Equities

NYSE National

NYSE Chicago

February 17, 2022

SPEC VERSION 4.9

Contents

1. Introduction

This document describes the implementation of the FIX 4.2 protocol used by the NYSE Group markets via the Pillar FIX Gateway. It includes information pertaining to application communication with the following venues.

Current Market Support	Future Market Support
NYSE	NYSE Bonds
NYSE Arca Equities	
NYSE American Equities	
NYSE National	
NYSE Chicago	

This document assumes the reader has a thorough understanding of the FIX 4.2 protocol available at http://www.fixprotocol.org/. As such, it is not intended as a guide to constructing a FIX client. Rather, it is a reference to ensure that a firm's FIX client, constructed according to the FIX 4.2 specifications, will be compatible with the Pillar FIX Gateway.

1.1 About the Pillar FIX Gateway

Pillar FIX Gateway is the application offering a single protocol for firms to transact business with one or more of the NYSE Group markets. It is a component of Pillar, an integrated trading technology platform that has been designed to reduce complexity, while enhancing consistency, performance and resiliency across the NYSE Group markets.

For more information on the Pillar trading platform and gateway rollout, please visit https://www.nyse.com/pillar.

1.2 Session Configuration by Market

Each session on the Pillar Gateway will be configured to access a single NYSE Group market. The market configuration will determine which market-specific FIX tags and values may be transacted over that session. For details on the applicability of each tag and value to the various markets, please refer to the FIX Application Layer message formats.

1.3 Failure Recovery

Each session on the Pillar Gateway is assigned two pairs of destination Pillar IP addresses, and one port number used by all four IPs. The IP/Port pairs correspond to the Pillar Primary and DR production environments.

- **Primary Production Environment** – Pillar FIX Gateway users may be logged in to either the primary or backup destination IP addresses, but not both, at any given time.
    - Once logged in, a successful login attempt on the other IP address will result in a logout on the first IP.
    - In the event that the primary destination becomes unavailable, the user should attempt to log in on the secondary IP address.
        - Cancel on Disconnect will be triggered if the outage was caused by a gateway failure or when the login occurs on the secondary IP address, honoring the Cancel on Disconnect configuration for the session.
        - The sequence number on the secondary IP address will always continue from the last Application Layer message transacted on the primary IP (and vice versa). That is, Session Layer messages will not be recovered nor counted in determining the next sequence number expected from the client.
    - In the event of an intraday session restart, both Primary and Secondary destination IP addresses will be temporarily unavailable.
        - All open orders entered on the affected session will be cancelled, regardless of the Cancel on Disconnect configuration for the session.
        - Upon restart:
            - If the session restart was not accompanied by a software release rollback, Application Layer messages transacted on the affected session prior to the outage will be recoverable, and the sequence number will continue from the last Application Layer message transacted. That is, Session Layer messages will not be recovered.
            - If the session restart was accompanied by a software release rollback, messages transacted on the affected session prior to the outage will not be recoverable. Sequence numbers will start with 1.
- **DR Production Environment** – In the event that the Pillar Primary Production environment becomes unavailable, Pillar FIX Gateway users may log in to the DR IP addresses configured for their sessions.
    - All open orders will be cancelled automatically, regardless of whether the user attempts to log back in or not and regardless of the Cancel on Disconnect configuration for the session.
    - UROUTs will not be sent for the orders.
    - Messages transacted on the affected session prior to the outage will not be recoverable. Sequence numbers will start with 1.

NYSE Pillar Risk Mitigation

In the event a matching engine enters an unexpected state, the Pillar Risk Mitigation process will be triggered.

- Gateway users will receive unsolicited cancels on all live orders on the impacted matching engine, including MOO, LOO, MOC, LOC, with a reason code ‘168 – Pillar Risk Mitigation’.
- The impacted matching engine will initiate an automatic recovery during which period new orders will be rejected with a reason code ‘76 – System not available’.
- Once the resumption is complete, users will need to resubmit MOO, LOO, MOC, and LOC orders.

1.4 Contact Us

The NYSE Group Market Support teams have a centralized phone number. Through this number, clients are able to reach all support contacts for Trading, Technical, Market Data and Client Relationship Services.

+1 212-896-2830

Follow the prompts for menu options.

2. Data Types

A data type and length are provided for each FIX tag in this specification in the “Data Type” column of the message format tables. These length values represent systemic limits enforced by the Pillar FIX Gateway. All values entered by firms are subject to additional validations, as indicated in the “Values” column of the tables.

Firms should not null pad a FIX tag to equal the systemic limit. Instead, each tag should be populated with the natural length of the intended value.

3. Maximum Order Price and Quantity

The maximum allowable limit Price and OrderQty for the NYSE Group equities markets are as follows. Order and Cancel/Replace messages entered with values larger than the following will be rejected.

- **Maximum Price** - for all NYSE Group equities markets except where noted. The maximum price is based on the Price Scale Code published in the NYSE XDP Symbol Index Mapping message:
  - **Symbols with price scale code 6** = $2,147.48
  - **Symbols with price scale code 4** = $214,748.364; except for orders routed to NYSE Floor Broker Systems which have a maximum of $9,999.99
  - **Symbols with price scale code 3** = $999,999.999; except for orders routed to NYSE Floor Broker Systems which have a maximum of $999,999.99

- **Maximum OrderQty**
  - **NYSE**
    - **Auction orders routed to matching engine** = 25,000,000 shares. Auction orders consist of MOO, LOO, MOC, LOC, Imbalance Offset for Close, Closing D Order, Opening D Order, and

DMM orders representing manual interest for open and close. The maximum does not apply to Issuer Direct Offering (IDO) Order
        - **All other orders routed to matching engine** = 5,000,000 shares
        - **Orders routed to NYSE Floor Broker Systems** = 99,000,000 shares
    - **NYSE Arca Equities, NYSE American Equities, NYSE National** = 5,000,000 shares
    - **NYSE Chicago**
        - **Cross orders** = 25,000,000 shares
        - **All other orders** = 5,000,000 shares

4. Mapping Orders and Executions to NYSE XDP Market Data

The NYSE Pillar FIX Gateway provides order and deal identifiers as unique 8 byte integers (unsigned Little Endian), represented as strings up to 20 characters in the following outgoing message types.

FIX Message Type	FIX Tag(s) for Mapping to XDP
MsgType 8 – Execution Report	OrderID (37), DealID (9483)
MsgType 9 – Cancel, Cancel/Replace Reject	OrderID (37)

To correlate the OrderID and TradeID values provided in the Pillar FIX Gateway with XDP 2.1 products:

- The full 8 bytes of the gateway “OrderID” correspond to the ‘OrderID’ field in XDP messages.
- Bytes 5 through 8 of the gateway “DealID” correspond to the ‘TradeID’ field in XDP messages.
    - In all XDP feeds, the MarketID and SystemID are provided in the Symbol Index Mapping, and these values are static for the trading day.
    - The table below shows the data structure of the 8-byte DealID value provided in the Pillar FIX Gateway as it maps to XDP fields. This table assumes the client byte ordering is Little Endian. If the client byte ordering is Big Endian, the byte order is reversed.

XDP Field Name	Offset	Size (Bytes)	XDP Format	Description
Reserved	0	1	Binary	0
SystemID	1	1	Binary	Unique ID of the originating Pillar symbol partition. This value is found in the Symbol Index Mapping message’s ID field.
MarketID	2	2	Binary	ID of the Originating market in the Symbol Index Mapping.
TradeID	4	4	Binary	Public TradeID as it will appear in XDP products.

For more information, please refer to the XDP Common Client Specification at https://www.nyse.com/market-data/real-time.

NYSE and NYSE Chicago - on response messages for orders routed to Brokerplex and NYSE Floor Broker Systems, the OrderID and TradeID values will not correlate with NYSE XDP Market Data.

5. Trading Services

5.1 Self-Trade Prevention

NYSE Group offers a Self-Trade Prevention (STP) service. This service is designed to allow firms to better manage their order flow and prevent unintended executions with themselves.

- **STP Cancel Newest –** An incoming order marked with this designation will not execute against opposite side resting interest that is also marked with the STP designation for the same MPID (OnBehalfOfCompID) + OnBehalfOfSubID (optional sub identifier)*. Instead, the incoming order or repriced order will be automatically cancelled back to the order originator. The resting order remains on the order book.

- **STP Cancel Oldest –** An incoming order marked with this designation will not execute against opposite side resting interest that is also marked with the STP designation for the same MPID (OnBehalfOfCompID) + OnBehalfOfSubID (optional sub identifier)*. Instead, the resting order will be automatically cancelled back to the order originator. The incoming order will then continue to auto execute or be placed on the order book.

- **STP Cancel Both –** An incoming order marked with this designation will not execute against opposite side resting interest that is also marked with the STP designation for the same MPID (OnBehalfOfCompID) + OnBehalfOfSubID (optional sub identifier). Instead, both the incoming order and the resting order will be cancelled back automatically.

- **STP Cancel Decrement –** An incoming order marked with this designation will not execute against opposite side resting interest marked with any of the STP designations for the same MPID (OnBehalfOfCompID) + OnBehalfOfSubID (optional sub identifier). Instead, for price-time allocation, if both orders are equivalent in quantity, both orders will be cancelled back to the order originator. If the orders are not equivalent in quantity, the larger order is decremented by the quantity of the smaller order, and the smaller order is fully cancelled. For parity allocation (applicable only to NYSE), both the portion of a resting order that would receive an allocation and the portion of the incoming order that would be allocated to that resting order will be cancelled back to the order originator.

***NYSE** - for orders routed to NYSE Floor Broker Systems, STP evaluation is performed as follows:

- **If ClientID (Tag 109) is specified** - orders with the same ClientID (Tag 109) values will not execute against each other

- **If ClientID (Tag 109) is not specified** - orders with the same MPID (OnBehalfOfCompID/Tag 115) will not execute against each other

- OnBehalfOfSubID (Tag 116) will not be considered in STP evaluation, regardless of whether or not it is specified

- STP is not evaluated between orders sent directly to the matching engine versus orders routed to NYSE Floor Broker Systems and then sent by a Broker to the matching engine. These orders will be allowed to trade with each other

5.2 Message Throttling

Inbound messages from a given session are read at a rate of 500 messages per rolling 100 milliseconds (including all Session and Application Layer message types).

A session becomes throttled when the message count reaches a value of 500 during the time window. A session becomes un-throttled when there are no messages to read from the firm.

Throttled messages are queued and processed in time sequence as the message read rate allows. Gap Fill Requests will be processed without impact to processing of inbound messages. However, responses to inbound application messages (acknowledgements, execution reports, etc.) will be sequenced after a Gap Fill Request that is in process.

5.3 FIX Drop Copies

Drop copies of order activity transacted over the Pillar FIX Gateway are available via a separate FIX gateway interface. When ordering new FIX drop copy sessions, recipients may choose from the following configuration options.

- **Market Participant Filters** – receive drop copies of activity filtered by one of the following criteria:
  - SenderCompID(s) – a single or multiple order entry session SenderCompIDs
  - MPID(s) – a single or multiple MPIDs

- **Order Activity Filters** – receive drop copies of outbound messages for either:
  - **All order activity** – all Execution Reports (MsgType = 8) regardless of OrdStatus, and all Order Cancel Rejects (MsgType = 9)
  - **Fills and Partial Fills only** – only Execution Reports (MsgType = 8) with OrdStatus = 1 (Partially Filled) and 2 (Filled)

NYSE Chicago - recipients configured with MPID filters on their drop copy sessions will be able to identify cross allocations done by NYSE Chicago IB Firms in the following manner via single sided execution report messages:

- Parent Firm MPID (9453) and Parent ClordID (9451) fields will be present
- Liquidity indicators (9730) will be one of the following:
  - Z
  - ZT
  - ZTZ
- The Sell side will be identified as a cross side, with the following mapping:
  - 8 (cross) = 2 (sell)
  - 9 (cross short) = 5 (sell short)
  - A (cross short exempt) = 6 (sell short exempt)
- Other key attributes:
  - OnBehalfOfSubID (116) will contain a Trading Account or MPID (more details in FIX header section)
  - Account (1) will contain a Subaccount related to the MPID or Trading Account
  - BrokerOMSID (20012) will contain the MPID of the NYSE Chicago IB Firm that executed the trade and handled the allocation
  - BillTo (9449) will contain values that that correspond to clearing/billing workflows for NYSE Chicago IB Firms

- In the event of a cancel or correction, the initial execution report for an allocation will always be busted. In the case of a correction, a new execution report may be received based on the terms that were changed (e.g. if firm was changed, then new execution report may not be received, vs if price was changed and firm was same, new execution report will be received).

6. FIX Header & Trailer

All FIX messages sent and received via the Pillar FIX Gateway must include a Header and Trailer as defined below.

6.1 Header

Tag	Field Name	Data Type	Req'd	Values
FIX-8	BeginString	String[8]	Y	(ALWAYS FIRST FIELD IN MESSAGE) FIX.4.2
FIX-9	BodyLength	Int[6]	Y	(ALWAYS SECOND FIELD IN MESSAGE) Message length, in bytes, forward to the CheckSum field.
FIX-35	MsgType	String[3]	Y	(ALWAYS THIRD FIELD IN MESSAGE) A = Logon 0 = Heartbeat 1 = Test Request 2 = Resend Request 3 = Session Layer Reject 4 = Sequence Reset 5 = Logout D = New Order Single F = Order Cancel Request G = Order Cancel/Replace Request 8 = Execution Report 9 = Order Cancel Reject
FIX-34	MsgSeqNum	Int[20]	Y	Last sequence number processed. First message sent has sequence of 1.
FIX-43	PossDupFlag	Boolean	C	Y = Yes N = No
FIX-49	SenderCompID	String[32]	Y	Incoming Messages from Firm: Agreed upon Connection identifier set between the Exchange and the entering firm. Outgoing Messages from Exchange: Market Identifier Code (MIC) of the sending Exchange. ARCX = NYSE Arca Equities XNYS = NYSE XASE = NYSE American Equities XCIS = NYSE National XCHI = NYSE Chicago
FIX-50	SenderSubID	String[32]	C	Incoming Messages from Firm: This value represents a Market Maker, LMM, SLP, SLMM or DMM, agreed upon between the firm and the Exchange. These firms must provide their MMID along with its associated MPID on all orders intended to receive credit

Tag	Field Name	Data Type	Req'd	Values
				for satisfying their market making/liquidity obligations. Outgoing Messages from Exchange: Set to the value of the original SenderCompID on the incoming message from the firm. On drop copy sessions, represents the SenderCompID of the order entry session which originated the message.
FIX-52	SendingTime	UTC Timestamp [27]	Y	Time of message transmission on Incoming Messages from Firms & Outgoing messages from Exchange. UTC time, in Milliseconds - YYYYMMDD-HH:MM:SS.mmm
FIX-56	TargetCompID	String[32]	Y	Incoming Messages from Firm: Market Identifier Code (MIC) of target Exchange. ARCX = NYSE Arca Equities XNYS = NYSE XASE = NYSE American Equities XCIS = NYSE National XCHI = NYSE Chicago Outgoing Messages from Exchange: Agreed upon connection identifier set between the Exchange and the entering firm.
FIX-57	TargetSubID	String[32]	C	On Incoming Messages from Firm: Populate with "RET" (all caps) to designate an order as eligible for retail billing. All other values will be rejected. Not valid for orders entered on NYSE Chicago. On Outgoing Messages from Exchange: If provided on the incoming message from the firm (in SenderSubID), will be populated with the Market Maker ID (MMID). This value represents a Market Maker, LMM, SLP, SLMM or DMM, agreed upon between the firm and the Exchange. These firms must provide their MMID along with its associated MPID on all orders intended to receive credit for satisfying their marking making/liquidity obligations. On Outgoing Messages from Exchange related to orders routed to NYSE Chicago IB Firms: will be populated with the badge of the IB firm personnel that handled the related action.
FIX-97	PossResend	Boolean	C	Y = Yes N = No
FIX-115	OnBehalfOfCompID	String[4]	C	Incoming Messages from Firm: Firm Identifier – MPID. Required on all Application Layer message types. If provided on a Session Layer message type, the value will not be validated. Outgoing Messages from Exchange: If provided on the incoming message from the firm (in DeliverToCompID), will be populated with the NYSE Agency Code or Floor Trader Badge, Options MarketMaker for Directed Order, or NYSE Chicago IB Firm Identifier.
FIX-116	OnBehalfOfSubID	String[4]	N	Incoming Messages from Firm to Exchange Matching Engine: Customer defined when sending to Matching engine– identifies

Tag	Field Name	Data Type	Req'd	Values
				specific entity/trading desk of the firm. For pre-trade risk controls, optional SubID. Incoming Messages from Firm to NYSE Chicago IB Firms: Trading Account for Non-Member Participants where applicable. Incoming Messages from Firm to NYSE Floor Broker Systems: Optional mnemonic. Only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark. ********** Outgoing messages from Exchange Matching Engine: If provided on the incoming message from the firm, will be populated with the specific entity/trading desk of the firm or pre-trade risk controls SubID. Outgoing messages from NYSE Chicago IB firms: If provided on the incoming message from the firm, will be populated with the Trading Account for Non-Member Participant. Outgoing messages from NYSE Floor Broker Systems: If provided on the incoming message from the firm, will be populated with mnemonic.
FIX-122	OrigSendingTime	UTC Timestamp [27]	N	Original time of message transmission when transmitting orders as the result of a resend request. UTC time, in Milliseconds - YYYYMMDD-HH:MM:SS.mmm
FIX-128	DelivertoCompID	String[5]	C	Incoming Messages from Firm: NYSE Floor Broker Agency ID or Badge - the value specified must not be "zero padded" to fill the max length of the tag. Options MarketMaker for Directed Order. NYSE Chicago IB Firm Identifier. If intended to route to non-Matching Engine destinations mentioned above, RouteToBroker (FIX-20011) must be populated as "Y". If RouteToBroker is not provided or a value of "N" is specified, the incoming message will be routed to the matching engine regardless of what is provided in the DelivertoCompID field. Outgoing Messages from Exchange: Firm Identifier – MPID. Required on all Application Layer message types.

6.2 Trailer

Tag	Field Name	Data Type	Req'd	Values
FIX-10	CheckSum	String[6]	Y	(ALWAYS LAST FIELD IN MESSAGE; Always unencrypted) Three byte, simple checksum that serves, with the trailing <SOH>, as the end-of-message delimiter.

7. FIX Session Layer

This section describes the protocol for the initiation, operation, and termination of FIX sessions with the Pillar FIX Gateway. TCP/IP is the required transmission protocol, and FIX 4.2 is the required application protocol supplemented by certain custom tags and values as defined in this specification. The Pillar FIX Gateway will reject a message with any tags that are not defined for the given message type in this specification.

7.1 Pillar FIX Session Layer Handling

The Pillar FIX Gateway validates and handles inbound Session Layer messages according to the following rules:

- **MsgSeqNum as expected** – all messages with a sequence number equal to the expected value will be accepted and processed in full, provided they pass basic message type format validations. This includes both Session and Application Layer messages, regardless of the PossDup or GapFillFlag values indicated on the inbound message.

- **MsgSeqNum greater than expected** – in general, upon receipt of a message with a sequence number greater than the expected value, Pillar FIX Gateway will neither accept nor process the message and will not increment the expected client-side sequence number. The gateway will respond with a Resend Request with BeginSeqNo = the expected value, and EndSeqNo = 0 (infinity).

  However, there are two cases with special handling:

  - **Login Request with MsgSeqNum greater than expected** – Pillar FIX Gateway will send a Logon Response, immediately followed by the Resend Request.

  - **Resend Request with MsgSeqNum greater than expected** – Pillar FIX Gateway will process the request, provided it passes basic message type format validations. The requested messages will be retransmitted to the client.

  - **Sequence Reset with GapFillFlag set to N, or not set** – Pillar FIX Gateway will accept and process the request, provided it passes basic message type format validations. The expected client-side sequence number will be adjusted according to the NewSeqNo specified in the Sequence Reset message, as long as the requested number is higher than the next expected value.

- **MsgSeqNum less than expected** – in general, upon receipt of a message with a sequence number less than the expected value, Pillar FIX Gateway will respond with a Session-Level Reject message, then close the TCP connection. The expected client-side sequence number will not be incremented.

  However, there are two cases with special handling:

  - **Any Message with PossDup set to Y** – Pillar FIX Gateway will silently ignore the message.

- **Sequence Reset with GapFillFlag set to N, or not set** – Pillar FIX Gateway will accept and process the request, provided it passes basic message type format validations. The expected client-side sequence number will be adjusted according to the NewSeqNo specified in the Sequence Reset message, as long as the requested number is higher than the next expected value.

7.2 Logon

This single message format is used as either a Logon Request or Logon Response depending on the message direction:

Usage	Description	Direction
Logon Request	Request to establish a FIX session.	Client to Gateway
Logon Response	Confirmation a FIX session has been established successfully.	Gateway to Client

The Pillar FIX Gateway authenticates the Logon Request by checking the SenderCompID [49] against the Username [553] and Password [554]. If either the Username or Password does not match the previously agreed value for that SenderCompID, the Pillar FIX Gateway will send a Logout Message [35=5] with SessionStatus [1409=5], then close the TCP connection. If the Logon Request is authenticated, the Pillar FIX Gateway will respond with a confirmation Logon Response.

The format for the Logon Request message is below:

<table>
<tr><th>Tag</th><th>Field Name</th><th>Data Type</th><th>Req'd</th><th>Description</th><th>Values</th></tr>
<tr><td></td><td>Standard Header</td><td></td><td>Y</td><td>MsgType [35] = A</td><td></td></tr>
<tr><td>FIX-98</td><td>EncryptMethod</td><td>Int[1]</td><td>Y</td><td>Must be 0 (No encryption).</td><td>0</td></tr>
<tr><td>FIX-108</td><td>HeartBtInt</td><td>Int[2]</td><td>Y</td><td>The Heartbeat interval in seconds.</td><td>1-60</td></tr>
<tr><td>FIX-95</td><td>RawDataLength</td><td>Int[1]</td><td>C</td><td>Length of RawData [96]. Must be included if RawData [96] is present.</td><td>3</td></tr>
<tr><td>FIX-96</td><td>RawData</td><td>String[3]</td><td>C</td><td>Session configuration settings. Optional on the Logon request, but always included in the Logon response. If included, all positions must be populated. Changes will be persisted for the length of the trading day or until the next time Pillar restarts.
Valid values:
<table>
<tr><th>Position</th><th>Description</th><th>Valid Values</th></tr>
<tr><td>1</td><td>Cancel on Disconnect</td><td>0 = Cancel on Disconnect Disabled

1 = Enable Cancel on Disconnect; Cancel – Day; Directed Orders
(This will cancel all orders for the Session EXCEPT Auction orders – TIF = 2-At the Opening and 7-On Close*)

2 = Enable Cancel on Disconnect. Cancel – ALL orders for the Session*

NYSE and NYSE Chicago - subscription with values 1 and 2 will cancel both orders in the matching engine and orders routed to NYSE Floor Broker Systems and Brokerplex.

*Exclusions – The following orders are always excluded from cancellation during a Cancel on</td></tr>
</table>
</td><td>Byte1: 0-2</td></tr>
</table>

Tag	Field Name	Data Type	Req'd	Description			Values
						Disconnect event: - IOC orders - NYSE Arca Equities and NYSE American Equities - for primary symbols - MOO/LOO orders for 1 minute prior to the Core Opening Auction - Primary Close Only Market/Limit (PO + MOC/LOC) orders for NYSE symbols after 3:50 PM - MOC/LOC orders during Closing Auction freeze; on NYSE, for primary symbols - MOC/LOC orders after 3:50 PM - NYSE - for primary symbols - all orders after scheduled closing time - NYSE - Issuer Direct Offering (IDO) order Note: Cancel on Disconnect may only be “upgraded” through Logon. If Cancel on Disconnect is Disabled by default, the Logon message can Enable it (setting = 1 or 2). If the default configuration value = 1, the Logon Request can be used to set the configuration = 2. A change in configuration from 2 to 1 or to 0 is not allowed through the Logon Request. To make these changes, the firm must contact NYSE Group Market Support.	
				2	Subscription to Order Priority Update Acknowledgements	0 = Not subscribed to receive the unsolicited "Order Priority Update Ack" message on the Session. 1 = Receive unsolicited "Order Priority Update Ack" message on the Session (for Reserve Order replenishment)	Byte2: 0-1
				3	Self-Trade Prevention	Session level default for the STP value on Order and Cancel/Replace requests entered on the session and destined for Pillar matching engine. Note: if the STP value is set on an individual Order or Cancel/Replace Request, that value will override this session level default. T = No Self Trade Prevention N = Cancel Newest O (letter O) = Cancel Oldest C = Cancel Both** D = Cancel Decrement** **For NYSE - C and D supported only on orders routed to matching engine; will be rejected on orders routed to NYSE Floor Broker Systems unless overridden with N or O on an order-by-order basis	Byte3: T,N,O, C**,D**
				Example: Tag 96 = 11C: Cancel all orders for the Session for Cancel on Disconnect AND			

Tag	Field Name	Data Type	Req'd	Description	Values
				Receive unsolicited "Order Priority Update Ack" message on the Session AND Cancel Both for Self Trade Prevention. If Tag 96 is omitted in the Logon request, Pillar FIX Gateway will use the client defaults. If Tag 96 is included, the default configuration for the client will be overridden for the single session only. Clients must contact NYSE Group Market Support to change default configurations.	
FIX-141	ResetSeqNum Flag	Boolean	N	Indicates both sides of a FIX session should reset sequence numbers. If included, this tag must be set to N.	N
FIX-553	Username	String [16]	Y	Username agreed in advance with NYSE Group – SenderCompID.	String [16]
FIX-554	Password	String [32]	Y	Password agreed in advance with NYSE Group. Required on Logon Request, but omitted from Logon response.	String [32]
	Standard Trailer		Y		

The format for the successful Logon Response message is below:

<table>
<tr><th>Tag</th><th>Field Name</th><th>Data Type</th><th>Req'd</th><th>Description</th><th>Values</th></tr>
<tr><td></td><td>Standard Header</td><td></td><td>Y</td><td>MsgType [35] = A</td><td></td></tr>
<tr><td>FIX-58</td><td>Text</td><td>String [100]</td><td>N</td><td>Text associated with Logon Response</td><td>String [100]</td></tr>
<tr><td>FIX-789</td><td>NextExpected MsgSeqNum</td><td>Int [20]</td><td>Y</td><td>Next MsgSeqNum [34] expected by Pillar</td><td>Next MsgSeqNum [34] expected by Pillar</td></tr>
<tr><td>FIX-98</td><td>EncryptMethod</td><td>Int [1]</td><td>Y</td><td>Must be 0 (No encryption).</td><td>0</td></tr>
<tr><td>FIX-108</td><td>HeartBtInt</td><td>Int [2]</td><td>Y</td><td>The Heartbeat interval in seconds.</td><td>1-60</td></tr>
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<tr><td>FIX-96</td><td>RawData</td><td>String [3]</td><td>C</td><td>Session configuration settings. Optional on the Logon request, but always included in the Logon response. If included, all positions must be populated. Changes will be persisted for the length of the trading day or until the next time Pillar restarts.
Valid values:
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</table>

Tag	Field Name	Data Type	Req'd	Description			Values
						*Exclusions – The following orders are always excluded from cancellation during a Cancel on Disconnect event: - IOC orders - NYSE Arca Equities and NYSE American Equities - for primary symbols - MOO/LOO orders for 1 minute prior to the Core Opening Auction - Primary Close Only Market/Limit (PO + MOC/LOC) orders for NYSE symbols after 3:50 PM - MOC/LOC orders during Closing Auction freeze; on NYSE, for primary symbols - MOC/LOC orders after 3:50 PM - NYSE - for primary symbols - all orders after scheduled closing time - NYSE - Issuer Direct Offering (IDO)order Note: Cancel on Disconnect may only be “upgraded” through Logon. If Cancel on Disconnect is Disabled by default, the Logon message can Enable it (setting = 1 or 2). If the default configuration value = 1, the Logon Request can be used to set the configuration = 2. A change in configuration from 2 to 1 or to 0 is not allowed through the Logon Request. To make these changes, the firm must contact NYSE Group Market Support.	
				2	Subscription to Order Priority Update Acknowledgements	0 = Not subscribed to receive the unsolicited "Order Priority Update Ack" message on the Session. 1 = Receive unsolicited "Order Priority Update Ack" message on the Session (for Reserve Order replenishment)	Byte2: 0-1
				3	Self Trade Prevention	Session level default for the STP value on Order and Cancel/Replace requests entered on the session and destined for Pillar matching engine. Note: if the STP value is set on an individual Order or Cancel/Replace Request, that value will override this session level default. T = No Self Trade Prevention N = Cancel Newest O (letter O) = Cancel Oldest C = Cancel Both* D = Cancel Decrement* **For NYSE - C and D supported only on orders routed to matching engine; will be rejected on orders routed to NYSE Floor Broker Systems unless overridden with N or O on an order-by-	Byte3: T,N,O, C**,D**

Tag	Field Name	Data Type	Req'd	Description	Values
				order basis Example: Tag 96 = 11C: Cancel all orders for the Session for Cancel on Disconnect AND Receive unsolicited "Order Priority Update Ack" message on the Session AND Cancel Both for Self Trade Prevention	
FIX-553	Username	String [16]	Y	Username agreed in advance with NYSE Group – SenderCompID.	String [16]
FIX-1409	SessionStatus	Int [1]	N	Status of FIX Session.	0 (Session Active)
	Standard Trailer		Y		

7.3 Logout

This single message format is used for different purposes depending on the message direction and SessionStatus [1409] value:

Usage	Description	Direction	SessionStatus [1409]
Logout Request	Client request to the Pillar FIX Gateway to terminate a FIX session.	Client to Pillar	n/a
Logout Response	The Pillar FIX Gateway response to a client Logout Request indicating the client may terminate the session.	Pillar to Client	0 = Session active
Unsolicited Logout	The Pillar FIX Gateway has terminated the FIX session.	Pillar to Client	4 = Session logout complete
Logon Reject	The Pillar FIX Gateway has rejected the client Logon Request.	Pillar to Client	5 = Invalid username or password

The format for the Logout message is below:

Tag	Field Name	Data Type	Req'd	Description	Values
	Standard Header		Y	MsgType[35] = 5	
FIX-1409	SessionStatus	Int[1]	N	Current status of the FIX session provided to indicate the message usage. The Pillar FIX Gateway will ignore this field if received from the client on a Logout message.	0 = Session Active 4 = Session logout complete 5 = Invalid username or password
FIX-58	Text	String [100]	N	Logout description.	String [100]
FIX-789	NextExpected MsgSeqNum	Int[20]	Y	Next MsgSeqNum [34] expected by Pillar	Next MsgSeqNum [34] expected by Pillar
	Standard Trailer		Y		

7.4 Heartbeat and Test Request

The client must send a Heartbeat message [35=0] if the interval specified in the Logon Message HeartBtInt [108] passes without the client sending any messages. If HeartBtInt seconds pass without the Pillar FIX Gateway receiving any messages from the client, the Pillar FIX Gateway will send a Test Request [35=1] to solicit a Heartbeat from the client. If an additional HeartBtInt seconds pass without receiving any messages, the Pillar FIX Gateway will send a logout and close the TCP connection.

It is recommended that the client implements similar monitoring for messages received from the Pillar FIX Gateway.

The Heartbeat message format is below:

Tag	Field Name	Data Type	Req'd	Description	Values
	Standard Header		Y	MsgType[35] = 0	
FIX-112	TestReqId	String[20]	C	Required when the Heartbeat is in response to a Test Request. Must be the same value as in the Test Request that solicited the Heartbeat.	String[20]
	Standard Trailer		Y		

The Test Request message format is below:

Tag	Field Name	Data Type	Req'd	Description	Values
	Standard Header		Y	MsgType[35] = 1	
FIX-112	TestReqID	String[20]	Y	Identifier included in Test Request message to be returned in resulting Heartbeat.	String[20]
	Standard Trailer		Y		

7.5 Message Retransmission

If Pillar receives a MsgSeqNum [34] higher than expected, Pillar will disregard or process the message, and may issue a Resend Request, as described in the "Pillar FIX Session Layer Handling" section of this specification.

Clients may issue a Resend Request to Pillar. In response, Pillar will retransmit Application Layer messages only. Pillar will never retransmit any Session Layer messages (including Session-Level Rejects).

The format for the Resend Request message is below:

Tag	Field Name	Data Type	Req'd	Description	Values
	Standard Header		Y	MsgType[35] = 2	
FIX-7	BeginSeqNo	Int[20]	Y	The message sequence number of the first message in the range of messages to be re-sent.	1-18446744073709551615
FIX-16	EndSeqNo	Int[20]	Y	The message sequence number of the last message in the range of messages to be re-sent. If the request is for all the messages since the BeginSeqNo, set EndSeqNo to 0.	0-18446744073709551615
	Standard Trailer		Y		

Note: Pillar will ignore the contents of PossResend [97] beyond basic message integrity validations and will treat all messages with PossResend = Y as new messages.

7.6 Sequence Reset

The client may send Pillar a Sequence Reset message to advance the next expected MsgSeqNum [34] Pillar should expect from the client:

Tag	Field Name	Data Type	Req'd	Description	Values
	Standard Header		Y	MsgType[35] = 4	
FIX-123	GapFillFlag	Boolean	Y	Indicates the mode in which the message is to be interpreted: Y = Gap Fill Reset (MsgSeqNum [34] validated) N = Sequence Reset (MsgSeqNum [34] ignored)	Y, N
FIX-36	NewSeqNo	Int[20]	Y	The new valid sequence number	1-18446744073709551615
	Standard Trailer		Y		

7.7 Session-Level Rejects

Pillar generates a Session-Level Reject upon receipt of a message containing a session-level rule violation (e.g. a required FIX tag is missing). Error details are contained in SessionRejectReason [373] and 58 [Text], while the tag causing the error (if applicable) is identified in RefTagID [371].

The Session-Level Reject message format is below:

Tag	Field Name	Data Type	Req'd	Description	Values
	Standard Header		Y	MsgType [35] = 3	
FIX-45	RefSeqNum	Int[20]	Y	The sequence number of the rejected message.	1-18446744073709551615
FIX-373	SessionRejectReason	Int[2]	N	A code, which identifies the reason for the session level reject. Valid values: 0 = Invalid Tag Number 1 = Required Tag Missing 2 = Tag Not Defined For This Message Type 3 = Undefined Tag 4 = Tag specified without a value 5 = Value is incorrect (out of range) for this tag 6 = Incorrect data format for value 7 = Decryption problem 8 = Signature problem 9 = CompID problem (SenderCompID, TargetCompID, or both) 10 = SendingTime accuracy problem 11 = Invalid MsgType 13 = Tag Appears More than Once (non-repeating group tags only) 14 = Tag specified out of required order 15 = Repeating group fields out of order 99 = Other	0 1 2 3 4 5 6 7 8 9 10 11 13 14 15 99
FIX-371	RefTagId	Int[9]	N	The tag number of the FIX field being referenced.	1-999999999
FIX-372	RefMsgType	String[2]	N	The MsgType of the FIX message being referenced.	String[2]
FIX-58	Text	String[100]	N	Reject text, which identifies the reason for the rejected message.	String[100]
FIX-789	NextExpected MsgSeqNum	Int[20]	Y	Next MsgSeqNum [34] expected by Pillar	Next MsgSeqNum [34] expected by Pillar
	Standard Trailer		Y		

8. FIX Application Layer

This section describes the FIX Application messages currently supported by the Pillar FIX Gateway. Only the message types represented here will be accepted.

Order, Cancel, and Cancel/Replace acknowledgments will be returned with all tags submitted on the original request.

8.1 New Order – Single

This message is used to send a New Order.

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
	Standard FIX Header		Y	MsgType = D	Yes	Yes	Yes	Yes	Yes
FIX-1	Account	String[16]	N	Customer defined up to 16 characters; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark.	Yes	Yes	Yes	Yes	Yes
FIX-11	ClOrdID	String[20]	Y	Unique ID of the new Order, Cancel, or Cancel/Replace request as assigned by the firm. Pillar will validate that the ClOrdID is unique for the combination of SenderCompID + OnBehalfOfCompID (MPID) that entered the order, among open orders only. However, the firm is responsible for ensuring that the ClOrdID provided is unique among all orders sent for the full length of the trading day by the given SenderCompID + MPID. Customer defined up to 20 characters; only printable ASCII characters allowed, excluding	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				comma, semicolon, pipe delimiter, “at” symbol, greater than/less than, ampersand (&) and single/double quotation mark. *NYSE - for orders routed to NYSE Floor Broker Systems, if alpha characters are used for the first two consecutive characters, then one of them must be lowercase.					
FIX-18	ExecInst	Char[1]	C	d = Tracking Order f = ISO B = OK to Cross E = DNI F = DNR G = All or None R = Primary Peg P = Market Peg M = MPL (Midpoint Liquidity) N = Non-displayed (Retail Price Improvement and Limit-Non Displayed orders) y = Trade-at ISO L = Last Sale Peg	f M N y L	d f R P M N y	d f R P M N y	d f R P M N y	d f R P M N y
FIX-38	OrderQty	Qty[9]	Y	1 - 999,999,999	Yes	Yes	Yes	Yes	Yes
FIX-40	OrdType	Char[1]	Y	1 = Market 2 = Limit 7 = Inside Limit 9 = AutoMatch Limit P = Pegged	1 2 7 P	1 2 7 P	1 2 7 P	1 2 7 P	1 2 7 P
FIX-44	Price	Price[16]	C	0.000001-999,999,999.999999	Yes	Yes	Yes	Yes	Yes
FIX-54	Side	Char[1]	Y	1 = Buy 2 = Sell 5 = Sell Short 6 = Sell Short Exempt 8 = Cross 9 = Cross Short A = Cross Short Exempt	1 2 5 6	1 2 5 6	1 2 5 6	1 2 5 6	1 2 5 6 8 9 A
FIX-55	Symbol	String[16]	Y	Valid Equities Ticker Symbol or Options	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				Underlying symbol.					
FIX-58	Text	String[80]	N	On Incoming Messages from Firm: Freeform text field; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark. *NYSE - for orders routed to NYSE Floor Broker Systems, max length is 40 characters. However, will not be passed back in Acknowledgments or any subsequent response messages. On Outgoing Message from Exchange: Reason code and text description for order activity. For example, reason for cancel/cancel-replace rejection.	Yes	Yes	Yes	Yes	Yes
FIX-59	TimeInForce	Char[1]	Y	0 = Day 1 = GTC 2 = At the Opening 3 = IOC 4 = FOK 5 = GTX 6 = GTD 7 = On Close	0 2 3 7	0 2 3 7	0 2 3 7	0 2 3 7	0 2 3 7
FIX-60	TransactTime	UTC Timestamp [27]	N	On Incoming Messages from Firm: Customer application time. On Outgoing Message from Exchange: Exchange application time.	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				UTC time, in Milliseconds YYYYMMDD-HH:MM:SS.mmm					
FIX-63	SettlementType	Char[1]	N	0 = Regular Way 1 = Cash* 2 = Next Day* *Only supported on Cross Orders. If not specified, the settlement type is assumed as regular way					0 1 2
FIX-65	SymbolSfx	String[10]	N	Valid Suffix value	Yes	Yes	Yes	Yes	Yes
FIX-109	ClientID	String[4]	C	Not supported when sending to Matching Engine. NYSE Chicago - Required for orders sent to Chicago IB Firms (Brokerplex). Should be agreed upon Originator ID. *NYSE - Optional identifier for CAT SenderIMID for NYSE Floor Broker Systems, also used for Self Trade Prevention. See "Self-Trade Prevention" section of this spec for more details.	Yes*				Yes
FIX-110	MinQty	Qty[5]	N	Must be ≥ Round Lot and ≤ OrderQty	Yes	Yes	Yes	Yes	Yes
FIX-111	MaxFloor	Qty[5]	C	Must be entered in Round Lots.	Yes	Yes	Yes	Yes	Yes
FIX-114	LocateReqd	Boolean	N	N = No Y = Yes	N Y	N Y	N Y	N Y	N Y
FIX-386	NoTradingSessions	Int[1]	Y	1	1	1	1	1	1
FIX-336	TradingSessionID	Char[1]	Y	1 = Early Trading Session 2 = Core Trading Session 3 = Late Trading Session 4 = Early & Core Trading Sessions 5 = Core & Late Trading	1 2 4* 5*	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				Sessions 6 = Early, Core, & Late Trading Sessions *Note: for symbols trading on NYSE, all values that include Core designation (Core, Early/Core, Core/Late, and Early/Core/Late) will be allowed, if the order type supports the combination on other Pillar markets. However, for each of those values, Pillar will honor the applicable trading sessions included in the instruction based on Tape (B/C symbols - Early and Core; A symbols - Core only), and ignore the other trading sessions specified in the instruction (Tape B/C symbols - Late; Tape A symbols - Early and Late)	 6*	 6	 6	 6	 6
FIX-528	OrderCapacity	Char[1]	Y	A = Agency P = Principal R = Riskless Principal Q = Error Account *NYSE and NYSE Chicago - supported only on orders routed to NYSE Floor Broker Systems and Brokerplex	A P R Q*	A P R	A P R	A P R	A P R Q*
FIX-7928	SelfTradeType	Char[1]	N	0 (number 0) = Use current Session Configuration STP setting for the SenderCompID T = No Self Trade Prevention N = Cancel Newest O (letter O)= Cancel Oldest C = Cancel Both D = Cancel Decrement *NYSE - supported only on orders routed to matching engine; not supported on orders	0 T* N O C* D*	0 T N O C D	0 T N O C D	0 T N O C D	0 T N O C D

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				routed to NYSE Floor Broker Systems					
FIX-9202	SpecialOrdType	Char[1]	C	1 = DMM Open/Re-open/Close with or without Auction (AOC) - drop copy only 2 = DMM Pre-auction - drop copy only 3 = DMM After-auction - drop copy only T = QCT (DeliverToCompID must be populated with IB Firm Identifier)					T
FIX-9303	RoutingInst	Char[1]	C	N = Non Routable R = Routable D = Directed (Primary Only) S = Directed + Routable (PO+S) 1 = Primary Market until 9:45 2 = Primary Market after 3:55 3 = BOTH Primary Market until 9:45 AND Primary Market after 3:55 8 = Minimum Fill (must be entered with MinQty tag populated with a non-zero value)	N R 8	N R D S 1 2 3 8	N R D S 1 2 3 8	N R D S 1 2 3 8	N R D S 1 2 3 8
FIX-9403	OffsetPrice	Price[16]	C	Value must be zero, or otherwise: - For Market Peg order - equal to or multiple of 0.01 - For Retail Price Improvement order (optional modifier on NYSE only) - equal to or multiple of 0.001	Yes	Yes	Yes	Yes	Yes
FIX-9416	ExtendedExecInst	Char[1]	C	A = Add Liquidity Only (ALO)	A	A	A	A	A

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				0 = No trade against MPL		0	0	0	0
				2 = No route to IOI			2	2	2
				3 = No trade against MPL and no route to IOI			3	3	3
				4 = Retail Order Type 1	4			4	
				5 = Retail Order Type 2				5	
				7 = Retail Provider	7			7	
				8 = Imbalance Offset	8	8		8	
				L = Light					
				C = Complex Order Auction					
				9 = Discretionary Peg		9		9	
				D = Dark (Non-Displayed) Primary Peg		D			
				I = Issuer Direct Offering (IDO)	I				
FIX-9448	IntroducingBadgeID	String[4]	C	1 – 4 numeric characters. Present on orders from Brokerplex to Pillar. Present on orders from NYSE Floor Broker Systems to Pillar.					Yes
FIX-9449	BillTo	String[4]	N	If the Broker will be billed for all NYSE transaction fees set value to "ALGO". Otherwise, it should be set to the firm identifier assigned to the Algo Vendor.					
FIX-9451	ParentFirmClOrdID	String[20]	C	<= 20 chars Present on orders from Brokerplex to Pillar. Present on orders from NYSE Floor Broker Systems to Pillar.					Yes
FIX-9453	ParentFirmMPID	String[4]	C	Firm Identifier - MPID. Present on orders from Brokerplex to Pillar. Present on orders from NYSE Floor Broker Systems to Pillar.					Yes
FIX-9478	InterestType	Char[1]	C	Q = Q-Order		Q	Q	Q	
FIX-9479	*Reserved*	Char[1]	N	*Reserved for future use.*					
FIX-9563	*Reserved*	String[9]	N	Reserved for future use.					

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
FIX-9565	DOrderAuctionPrice	Price[16]	N	0.01 - 999,999.99					
FIX-20001	AttributedQuote	Char[1]	N	0 = Not Attributed 1 = Attributed for Market Data Feeds 2 = Include in Broker Volume 3 = Attributed for Market Data Feeds, and Include in Broker Volume	0	0 1	0 1	0 1	0 1
FIX-20002	ProactiveIfLocked	Char[1]	N	0 = No locked functionality 1 = Proactive if Locked for routable orders 2 = Proactive trade non-display (Non-display remove liquidity for non-displayed orders locked by contraside ALOs)	0	0 1 2	0 1 2	0 1 2	0 1 2
FIX-20003	CancelInsteadOf Reprice	Char[1]	N	0 = Not applicable (follow default order behavior) 1 = Cancel order instead of repricing – for LULD only	0	0 1	0 1	0 1	0 1
FIX-20011	RouteToBroker	Char[1]	C	Required when intending to route message to non-Matching Engine destination (i.e. NYSE Chicago Brokerplex or NYSE Floor Broker Systems) based on value provided in DelliverToCompID on incoming messages from Firm Y = Route to non-Matching Engine destination N = Route to Matching Engine If not specified, will be assumed as a value of "N", and will be routed directly to Matching Engine	Y N				Y N

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
FIX-20012	BrokerOMSID	String[4]	C	Present on orders from Brokerplex to Pillar to identify the Broker ID targeted by the parent order.					Yes
FIX-20013	SubIDIndicator	Char[1]	N	When populating both OnBehalfOfSubID (116) and SelfTradeType (7928) on an order, allows the firm to specify whether the OnBehalfOfSubID should be used or ignored for Self-Trade Prevention (STP) evaluation. See "Self-Trade Prevention" section of this spec for more details. If also using Pillar Pre-trade Risk Controls, the OnBehalfOfSubID will be used for Risk Entity purposes regardless of the value specified in this field. 0 = for this order, use OnBehalfOfSubID (within the MPID) for STP evaluation 1 = for this order, ignore the OnBehalfOfSubID for STP (conduct STP evaluation at MPID level only) If not specified, will be assumed as a value of 0.	0 1	0 1	0 1	0 1	0 1
	Standard FIX Trailer		Y	Standard FIX Trailer	Yes	Yes	Yes	Yes	Yes

8.2 Order Cancel Request

This message is used to either cancel a single targeted order, or to bulk cancel multiple orders based on the combination of criteria specified in the message.

Single Order Cancel Request:

- OnBehalfOfCompID (115) in the FIX Header of the Cancel Request must be populated with the same MPID that was sent on the order intended for cancellation.

- NYSE and NYSE Chicago - if Pillar can find the OrigClOrdID specified, the cancel request will be routed either to the matching engine or to NYSE Floor Broker Systems/Brokerplex, regardless of how RouteToBroker (20011) is specified on the cancel request message.

Bulk Cancel Request:

- As with all Application Layer FIX messages, OnBehalfOfCompID (115) in the FIX Header must be populated with a valid MPID configured for use on that session.
  - When selecting a Bulk Cancel Code in OrderID (37) for MPID-level order cancellation, the MPID provided in OnBehalfOfCompID will determine the MPID whose orders are cancelled.
  - When selecting a Bulk Cancel Code in OrderID (37) for Session-level order cancellation, all orders entered on the session will be cancelled, regardless of their MPIDs and the value provided in OnBehalfOfCompID.

- To enter a Bulk Cancel Request for a particular MMID, the firm may populate SenderSubID (50) in the FIX Header with the MMID targeted for cancellation. This will limit the scope of cancellation to Q Orders entered with the specified MMID.

- NYSE and NYSE Chicago - the bulk cancel request will be routed to both the matching engine and to NYSE Floor Broker Systems/Brokerplex, regardless of how RouteToBroker (20011) is specified on the cancel request message. This will result in cancellation of both orders in the matching engine as well as orders routed to brokers.

- Exclusions – the following orders are always excluded from cancellation by a Bulk Cancel Request:
  - IOC orders
  - NYSE Arca Equities and NYSE American Equities - for primary symbols - MOO/LOO orders for 1 minute prior to the Core Opening Auction
  - Primary Close Only Market/Limit (PO + MOC/LOC) orders for NYSE symbols after 3:50 PM
  - MOC/LOC orders during Closing Auction freeze; on NYSE, for primary symbols - MOC/LOC orders after 3:50 PM
  - NYSE - for primary symbols - all orders after scheduled closing time
  - NYSE - Issuer Direct Offering (IDO)order

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
	Standard FIX Header		Y	MsgType = F	Yes	Yes	Yes	Yes	Yes
FIX-11	ClOrdID	String[20]	Y	Unique ID of the new Order, Cancel, or Cancel/Replace request as assigned by the firm. Pillar will validate that the	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				ClOrdID is unique for the combination of SenderCompID + OnBehalfOfCompID (MPID) that entered the order, among open orders only. However, the firm is responsible for ensuring that the ClOrdID provided is unique among all orders sent for the full length of the trading day by the given SenderCompID + MPID. Customer defined up to 20 characters; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark. *NYSE - for orders routed to NYSE Floor Broker Systems, if alpha characters are used for the first two consecutive characters, then one of them must be lowercase.					
FIX-37	OrderID	String[20]	C	Required for Bulk Cancel - populate with Bulk Cancel Code: 1 = Cancel orders for the individual gateway session only. Cancel – Day; Directed Orders 2 = Cancel orders for the individual gateway session only. Cancel – ALL orders 3 = Cancel orders for the	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				individual gateway session only. Cancel – At the Opening; Day; Directed orders 4 = Cancel orders for the MPID. Cancel – At the Opening; Day; Directed orders 5 = Cancel orders for the MPID. Cancel – Day; Directed orders 6 = Cancel orders for the MPID. Cancel – GTC orders (NYSE Arca & American Options only) 7 = Cancel orders for the MPID. Cancel – At the Opening and On Close orders 8 = Cancel orders for the MPID. Cancel – Day orders 9 = Cancel orders for the MPID, and Block all new order entry for the MPID. Cancel – Day; Directed orders 10 = Block all new order entry for the MPID 11 = Unblock new order entry for the MPID 12 = Cancel orders for the MPID. Cancel – Directed orders	4 5 7 8 9 10 11 12	4 5 7 8 9 10 11 12	4 5 7 8 9 10 11 12	4 5 7 8 9 10 11 12	4 5 7 8 9 10 11 12
FIX-41	OrigClOrdID	String[20]	C	Required for single order cancellation. Represents the ClOrdID of the previously entered	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				order intended for cancellation (NOT necessarily the initial order of the day). Customer defined up to 20 characters; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark. *NYSE - for orders routed to NYSE Floor Broker Systems, if alpha characters are used for the first two consecutive characters, then one of them must be lowercase.					
FIX-54	Side	Char[1]	C	Required for single order cancellation. Optional for Bulk Cancel. On a Bulk Cancel Request, 1 (Buy) and 2 (Sell) are supported. In that case, 2 (Sell) will cancel all Sell, Sell Short, and Sell Short Exempt orders. 1 = Buy 2 = Sell 5 = Sell Short 6 = Sell Short Exempt 8 = Cross 9 = Cross Short A = Cross Short Exempt	1 2 5 6	1 2 5 6	1 2 5 6	1 2 5 6	1 2 5 6 8 9 A
FIX-55	Symbol	String[16]	C	Required for single order cancellation; Valid Equities Ticker Symbol or Options Underlying symbol. Optional for Bulk Cancel.	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
FIX-60	TransactTime	UTC Timestamp [27]	N	On Incoming Messages from Firm: Customer application time. On Outgoing Message from Exchange: Exchange application time. UTC time, in Milliseconds YYYYMMDD-HH:MM:SS.mmm	Yes	Yes	Yes	Yes	Yes
FIX-65	SymbolSfx	String[10]	N	Valid Suffix value	Yes	Yes	Yes	Yes	Yes
FIX-20011	RouteToBroker	Char[1]	C	Required when intending to route message to non-Matching Engine destination (i.e. NYSE Chicago Brokerplex or NYSE Floor Broker Systems) based on value provided in DelliverToCompID on incoming messages from Firm Y = Route to non-Matching Engine destination N = Route to Matching Engine If not specified, will be assumed as a value of "N", and will be routed directly to Matching Engine	Y N				Y N
	Standard FIX Trailer		Y	Standard FIX Trailer	Yes	Yes	Yes	Yes	Yes

8.3 Order Cancel/Replace Request

This message may be used in two ways:

- **Full Cancel/Replace Request –** used to make changes to an order without preserving its ranking in the Exchange order book. The replacement order will get a new ClOrdID (equal to the ClOrdID of the Cancel/Replace Request), a new Timestamp, and a new OrderID.

- **Modify Request –** used to reduce the total number of shares/contract order quantity, or to change the side of an existing order between Sell, Sell Short, and Sell Short Exempt only, while preserving the order's ranking in the Exchange order book as well as its original OrderID.

  The modified order, however, will get a new ClOrdID (equal to the ClOrdID of the Modify Request).

  Note: Reducing the total quantity to 0 will cancel the order.

In both cases, the following tags in the FIX Header of the Cancel/Replace Request must be populated with the same values that were sent on the original order intended for replacement:

- **OnBehalfOfCompID (115)** – MPID

- **SenderSubID (50)** – MMID

- **NYSE and NYSE Chicago** – for cancel/replacement of orders routed to NYSE Floor Broker Systems and Brokerplex, the combination of values in tags **OnBehalfOfCompID (115) + OnBehalfOfSubID (116) + DeliverToCompID (128) + RouteToBroker (20011)**

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chciago
	Standard FIX Header		Y	MsgType = G	Yes	Yes	Yes	Yes	Yes
FIX-1	Account	String[16]	N	Customer defined up to 16 characters; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark.	Yes	Yes	Yes	Yes	Yes
FIX-11	ClOrdID	String[20]	Y	Unique ID of the new Order, Cancel, or Cancel/Replace request as assigned by the firm. Pillar will validate that the ClOrdID is unique for the	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chciago
				combination of SenderCompID + OnBehalfOfCompID (MPID) that entered the order, among open orders only. However, the firm is responsible for ensuring that the ClOrdID provided is unique among all orders sent for the full length of the trading day by the given SenderCompID + MPID. Customer defined up to 20 characters; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, “at” symbol, greater than/less than, ampersand (&) and single/double quotation mark. *NYSE - for orders routed to NYSE Floor Broker Systems, if alpha characters are used for the first two consecutive characters, then one of them must be lowercase.					
FIX-18	ExecInst	Char[1]	C	d = Tracking Order f = ISO B = OK to Cross E = DNI F = DNR G = All or None R = Primary Peg P = Market Peg M = MPL (Midpoint Liquidity) N = Non-displayed (Retail Price Improvement and Limit-Non Displayed orders) y = Trade-at ISO L = Last Sale Peg	f M N y L	d f R P M N y	d f R P M N y	d f R P M N y	d f R P M N y

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chciago
FIX-38	OrderQty	Qty[9]	Y	1 - 999,999,999	Yes	Yes	Yes	Yes	Yes
FIX-40	OrdType	Char[1]	Y	1 = Market 2 = Limit 7 = Inside Limit 9 = AutoMatch Limit P = Pegged	1 2 7 P	1 2 7 P	1 2 7 P	1 2 7 P	1 2 7 P
FIX-41	OrigClOrdID	String[20]	Y	ClOrdID of the previously entered order intended for cancellation or replacement (NOT necessarily the initial order of the day). Customer defined up to 20 chars; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark. *NYSE - for orders routed to NYSE Floor Broker Systems, if alpha characters are used for the first two consecutive characters, then one of them must be lowercase.	Yes	Yes	Yes	Yes	Yes
FIX-44	Price	Price[16]	C	0.000001-999,999,999.999999	Yes	Yes	Yes	Yes	Yes
FIX-54	Side	Char[1]	Y	1 = Buy 2 = Sell 5 = Sell Short 6 = Sell Short Exempt 8 = Cross 9 = Cross Short A = Cross Short Exempt	1 2 5 6	1 2 5 6	1 2 5 6	1 2 5 6	1 2 5 6 8 9 A
FIX-55	Symbol	String[16]	Y	Valid Equities Ticker Symbol or Options Underlying symbol.	Yes	Yes	Yes	Yes	Yes
FIX-58	Text	String[80]	N	On Incoming Messages from Firm: Freeform text field; only printable ASCII	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chciago
				characters allowed, excluding comma, semicolon, pipe delimiter, “at” symbol, greater than/less than, ampersand (&) and single/double quotation mark. *NYSE - for orders routed to NYSE Floor Broker Systems, max length is 40 characters. However, will not be passed back in Acknowledgments or any subsequent response messages. On Outgoing Messages from Exchange: Reason code and text description for order activity. For example, reason for cancel/cancel-replace rejection.					
FIX-59	TimeInForce	Char[1]	Y	0 = Day 1 = GTC 2 = At the Opening 3 = IOC 4 = FOK 5 = GTX 6 = GTD 7 = On Close	0 2 3 7	0 2 3 7	0 2 3 7	0 2 3 7	0 2 3 7
FIX-60	TransactTime	UTC Timestamp [27]	N	On Incoming Messages from Firm: Customer application time. On Outgoing Messages from Exchange: Exchange application time. UTC time, in Milliseconds YYYYMMDD-HH:MM:SS.mmm	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chciago
FIX-65	SymbolSfx	String[10]	N	Valid Suffix value	Yes	Yes	Yes	Yes	Yes
FIX-109	ClientID	String[4]	C	Not supported when sending to Matching Engine. NYSE Chicago - Required for orders sent to Chicago IB Firms (Brokerplex). Should be agreed upon Originator ID. *NYSE - Optional identifier for CAT SenderIMID for NYSE Floor Broker Systems, also used for Self Trade Prevention. See "Self-Trade Prevention" section of this spec for more details.	Yes*				Yes
FIX-110	MinQty	Qty[5]	N	Must be ≥ Round Lot and ≤ OrderQty	Yes	Yes	Yes	Yes	Yes
FIX-111	MaxFloor	Qty[5]	C	Must be entered in Round Lots.	Yes	Yes	Yes	Yes	Yes
FIX-114	LocateReqd	Boolean	N	N = No Y = Yes	N Y	N Y	N Y	N Y	N Y
FIX-386	NoTradingSessions	Int[1]	Y	1	1	1	1	1	1
→ FIX-336	TradingSessionID	Char[1]	Y	1 = Early Trading Session 2 = Core Trading Session 3 = Late Trading Session 4 = Early & Core Trading Sessions 5 = Core & Late Trading Sessions 6 = Early, Core, & Late Trading Sessions *Note: for symbols trading on NYSE, all values that include Core designation (Core, Early/Core, Core/Late, and Early/Core/Late) will be allowed, if the order type supports the combination on	1 2 4* 5* 6*	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chciago
				other Pillar markets. However, for each of those values, Pillar will honor the applicable trading sessions included in the instruction based on Tape (B/C symbols - Early and Core; A symbols - Core only), and ignore the other trading sessions specified in the instruction (Tape B/C symbols - Late; Tape A symbols - Early and Late)					
FIX-528	OrderCapacity	Char[1]	Y	A = Agency P = Principal R = Riskless Principal Q = Error Account *NYSE and NYSE Chicago - supported only on orders routed to NYSE Floor Broker Systems and Brokerplex	A P R Q*	A P R	A P R	A P R	A P R Q*
FIX-7928	SelfTradeType	Char[1]	N	0 (number 0) = Use current Session Configuration STP setting for the SenderCompID T = No Self Trade Prevention N = Cancel Newest O (letter O)= Cancel Oldest C = Cancel Both D = Cancel Decrement *NYSE - supported only on orders routed to matching engine; not supported on orders routed to NYSE Floor Broker Systems	0 T* N O C* D*	0 T N O C D	0 T N O C D	0 T N O C D	0 T N O C D
FIX-9202	SpecialOrdType	Char[1]	N	T = QCT (DeliverToComp ID must be populated with IB Firm Identifier)					T
FIX-9303	RoutingInst	Char[1]	C	N = Non Routable R = Routable D = Directed (Primary Only) S = Directed + Routable	N R	N R D S	N R D S	N R D S	N R D S

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chciago
				(PO+S) 1 = Primary Market until 9:45 2 = Primary Market after 3:55 3 = BOTH Primary Market until 9:45 AND Primary Market after 3:55 8 = Minimum Fill (must be entered with MinQty tag populated with a non-zero value)	8	1 2 3 8	1 2 3 8	1 2 3 8	1 2 3 8
FIX-9403	OffsetPrice	Price[16]	C	Value must be zero, or otherwise: - For Market Peg order - equal to or multiple of 0.01 - For Retail Price Improvement order (optional modifier on NYSE only) - equal to or multiple of 0.001	Yes	Yes	Yes	Yes	Yes
FIX-9416	ExtendedExecInst	Char[1]	C	A = Add Liquidity Only (ALO) 0 = No trade against MPL 2 = No route to IOI 3 = No trade against MPL and no route to IOI 4 = Retail Order Type 1 5 = Retail Order Type 2 7 = Retail Provider 8 = Imbalance Offset L = Light C = Complex Order Auction 9 = Discretionary Peg D = Dark (Non-Displayed) Primary Peg I = Issuer Direct Offering (IDO)	A 4 7 8 I	A 0 8 9 D	A 0 2 3	A 0 2 3 4 5 7 8 9	A 0 2 3

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chciago
FIX-9448	IntroducingBadgeID	String[4]	C	1 – 4 numeric characters. Present on orders from Brokerplex to Pillar. Present on orders from NYSE Floor Broker Systems to Pillar.					Yes
FIX-9449	BillTo	String[4]	N	If the Broker will be billed for all NYSE transaction fees set value to “ALGO”. Otherwise, it should be set to the firm identifier assigned to the Algo Vendor.					
FIX-9451	ParentFirmClOrdID	String[20]	C	<= 20 chars Present on orders from Brokerplex to Pillar. Present on orders from NYSE Floor Broker Systems to Pillar.					Yes
FIX-9453	ParentFirmMPID	String[4]	C	Firm Identifier - MPID. Present on orders from Brokerplex to Pillar. Present on orders from NYSE Floor Broker Systems to Pillar.					Yes
FIX-9478	InterestType	Char[1]	C	Q = Q-Order		Q	Q	Q	
FIX-9479	*Reserved*	Char[1]	N	*Reserved for future use.*					
FIX-9563	*Reserved*	String[9]	N	Reserved for future use.					
FIX-9565	DOrderAuctionPrice	Price[16]	N	0.01 - 999,999.99					
FIX-20001	AttributedQuote	Char[1]	N	0 = Not Attributed 1 = Attributed for Market Data Feeds 2 = Include in Broker Volume 3 = Attributed for Market Data Feeds, and Include in Broker Volume	0	0 1	0 1	0 1	0 1
FIX-20002	ProactiveIfLocked	Char[1]	N	0 = No locked functionality 1 = Proactive if Locked for routable orders 2 = Non-display remove	0	0 1 2	0 1 2	0 1 2	0 1 2

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chciago
				liquidity for non-displayed orders locked by contraside ALOs					
FIX-20003	CancelInsteadOfReprice	Char[1]	N	0 = Not applicable (follow default order behavior) 1 = Cancel order instead of repricing – for LULD only	0	0 1	0 1	0 1	0 1
FIX-20011	RouteToBroker	Char[1]	C	Required when intending to route message to non-Matching Engine destination (i.e. NYSE Chicago Brokerplex or NYSE Floor Broker Systems) based on value provided in DelliverToCompID on incoming messages from Firm Y = Route to non-Matching Engine destination N = Route to Matching Engine If not specified, will be assumed as a value of "N", and will be routed directly to Matching Engine	Y N				Y N
FIX-20012	BrokerOMSID	String[4]	C	Present on orders from Brokerplex to Pillar to identify the Broker ID targeted by the parent order.					Yes
FIX-20013	SubIDIndicator	Char[1]	N	When populating both OnBehalfOfSubID (116) and SelfTradeType (7928) on an order, allows the firm to specify whether the OnBehalfOfSubID should be used or ignored for Self-Trade Prevention (STP) evaluation. See "Self-Trade Prevention" section of this spec for more details.					

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chciago
				If also using Pillar Pre-trade Risk Controls, the OnBehalfOfSubID will be used for Risk Entity purposes regardless of the value specified in this field. 0 = for this order, use OnBehalfOfSubID (within the MPID) for STP evaluation 1 = for this order, ignore the OnBehalfOfSubID for STP (conduct STP evaluation at MPID level only) If not specified, will be assumed as a value of 0.	0 1	0 1	0 1	0 1	0 1
	Standard FIX Trailer		Y	Standard FIX Trailer	Yes	Yes	Yes	Yes	Yes

8.4 Order Cancel Reject

This message is used to reject a Cancel or Cancel/Replace Request.

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
	Standard FIX Header		Y	MsgType = 9	Yes	Yes	Yes	Yes	Yes
FIX-11	ClOrdID	String[20]	Y	Returned from the Cancel or Cancel/Replaced Request – the ClOrdID of the message that is rejected (Cancel or Cancel/Replace request). Pillar will validate that the ClOrdID is unique for the combination of	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				SenderCompID + OnBehalfOfCompID (MPID) that entered the order, among open orders only. However, the firm is responsible for ensuring that the ClOrdID provided is unique among all orders sent for the full length of the trading day by the given SenderCompID + MPID. Customer defined up to 20 characters; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark. *NYSE - for orders routed to NYSE Floor Broker Systems, if alpha characters are used for the first two consecutive characters, then one of them must be lowercase.					
FIX-37	OrderID	String[20]	Y	OrderID of the order intended for cancellation or replacement. Unique identifier of most recent order as assigned by the Exchange. Published externally to market data feeds. Numerical up to 20 characters.	Yes	Yes	Yes	Yes	Yes
FIX-39	OrdStatus	Char[1]	Y	Status of the order: 0 = New 1 = Partially Filled 2 = Filled 3 = Done For Day					

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				4 = Cancelled 5 = Replaced 6 = Pending Cancel 8 = Rejected C = Billable Cancel (Self Trade Prevention) E = Pending Replace M = Pending Modify	8	8	8	8	8
FIX-41	OrigClOrdID	String[20]	C	Returned from Order Cancel or Cancel/Replace Request. Represents the ClOrdID of the previously entered order intended for cancellation or replacement (NOT necessarily the initial order of the day). Customer defined up to 20 chars; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark. *NYSE - for orders routed to NYSE Floor Broker Systems, if alpha characters are used for the first two consecutive characters, then one of them must be lowercase.	Yes	Yes	Yes	Yes	Yes
FIX-58	Text	String[40]	N	On Incoming Messages from Firm: Freeform text field; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				mark. *NYSE - for orders routed to NYSE Floor Broker Systems, max length is 40 characters. However, will not be passed back in Acknowledgments or any subsequent response messages. On Outgoing Message from Exchange: Reason code and text description for order activity, up to 40 characters. For example, reason for cancel/cancel-replace rejection.					
FIX-60	TransactTime	UTC Timestamp [27]	N	On Incoming Messages from Firm: Customer application time. On Outgoing Message from Exchange: Exchange application time. UTC time, in Milliseconds YYYYMMDD-HH:MM:SS.mmm	Yes	Yes	Yes	Yes	Yes
FIX-434	CxlRejResponseTo	Char[1]	Y	1 = Order Cancel Request 2 = Order Cancel/Replace Request	1 2	1 2	1 2	1 2	1 2
FIX-20009	Nanosecond SendingTime	String[27]	Y	Time of message transmission on outgoing message from Exchange. UTC time, in Nanoseconds – YYYYMMDD-HH:MM:SS.sssssssss	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				Note: this represents the same reference time as provided in the Standard FIX Header tag SendingTime (52), with more granular resolution.					
FIX-20010	Nanosecond TransactTime	String[27]	Y	Exchange application time. UTC time, in Nanoseconds – YYYYMMDD-HH:MM:SS.sssssssss Note: this represents the same reference time as provided in the standard FIX tag TransactTime (60), with more granular resolution.	Yes	Yes	Yes	Yes	Yes
FIX-20011	RouteToBroker	Char[1]	C	Required when intending to route message to non-Matching Engine destination (i.e. NYSE Chicago Brokerplex or NYSE Floor Broker Systems) based on value provided in DelliverToCompID on incoming messages from Firm Y = Route to non-Matching Engine destination N = Route to Matching Engine If not specified, will be assumed as a value of "N", and will be routed directly to Matching Engine	Y N				Y N
	Standard FIX Trailer		Y	Standard FIX Trailer	Yes	Yes	Yes	Yes	Yes

8.5 Execution Report

This message is used to confirm new orders, cancellations, replacements, fills, trade busts, trade corrections (NYSE Chicago only), and order rejections.

It is also used as a Billable Cancel message when ExecType = C (Billable Cancel). This message is sent only for STP types Cancel Both and Cancel Decrement, and is generated for the quantity that was prevented from trading (matching quantity). Then, if the balance of either order needs to be cancelled as a result of the STP instruction, a UROUT will be sent for the remaining shares with with ExecType = 4 (Canceled).

On the Billable Cancel message, 'LastQty' represents the matching quantity and 'LastPx' represents the price at which the orders would have executed had they been allowed to trade.

This message may also be sent unsolicited by the Exchange as an Order Priority Update Acknowledgement to notify the firm of a Reserve Order replenishment event. Firms control receipt of these Acks by session level subscription via the Logon Request message. The Ack indicates that the displayed portion of a Reserve Order has been replenished according to the order's 'MaxFloor'. The replenishment order is assigned a new OrderID, which is provided in the message.

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
	Standard FIX Header		Y	MsgType = 8	Yes	Yes	Yes	Yes	Yes
FIX-1	Account	String[16]	N	Customer defined up to 16 characters; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark.	Yes	Yes	Yes	Yes	Yes
FIX-11	ClOrdID	String[20]	Y	Unique ID of the new Order, Cancel, or Cancel/Replace request	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				as assigned by the firm. Pillar will validate that the ClOrdID is unique for the combination of SenderCompID + OnBehalfOfCompID (MPID) that entered the order, among open orders only. However, the firm is responsible for ensuring that the ClOrdID provided is unique among all orders sent for the full length of the trading day by the given SenderCompID + MPID. Customer defined up to 20 characters; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark. *NYSE - for orders routed to NYSE Floor Broker Systems, if alpha characters are used for the first two consecutive characters, then one of them must be lowercase.					
FIX-14	CumQty	Qty[9]	C	0 - 999,999,999	Yes	Yes	Yes	Yes	Yes
FIX-17	ExecID	String[32]	Y	Unique identifier of the outgoing FIX message, assigned by the Exchange to all FIX MsgType 8. Up to 32 characters.	Yes	Yes	Yes	Yes	Yes
FIX-18	ExecInst	Char[1]	C	d = Tracking Order f = ISO B = OK to Cross	f	d f	d f	d f	d f

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				E = DNI F = DNR G = All or None R = Primary Peg P = Market Peg M = MPL (Midpoint Liquidity) N = Non-displayed (Retail Price Improvement and Limit-Non Displayed orders) y = Trade-at ISO L = Last Sale Peg v = Stock-Option/Stock-Future Contingent (only present on outbound drop copy messages)	M N y L	R P M N y	R P M N y	R P M N y	R P M N y v
FIX-19	ExecRefID	String[32]	C	Contains the ExecID (Tag 17) value of the Fill that is busted or corrected. Up to 32 characters.	Yes	Yes	Yes	Yes	Yes
FIX-20	ExecTransType	Char[1]	Y	0 = New (ack, pending cancel, pending replace, partial fill, fill, order reject) 1 = Cancel (Trade Break Only) 2 = Correct (Trade Correction Only) *NYSE - supported only for orders routed to NYSE Floor Broker Systems	0 1 2*	0 1	0 1	0 1	0 1 2
FIX-30	LastMkt	String[4]	C	On fills and partial fills, Market Identifier Code (MIC) of the sending Exchange (regardless of local or away market execution) or other destinations for NYSE and NYSE Chicago, as noted below. ARCX = NYSE Arca Equities XNYS = NYSE XASE = NYSE American Equities	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				XCIS = NYSE National XCHI = NYSE Chicago TRFN = NYSE TRF (Chicago EQ only via Brokerplex) NOTH = Manual Destination (Chicago EQ only via Brokerplex) ALGO = algorithm away market execution (NYSE only via NYSE Floor Broker Systems)					
FIX-31	LastPx	Price[16]	C	Price of current partial fill or fill message (set to 0 on all non-fills). 0 - 999999.999999	Yes	Yes	Yes	Yes	Yes
FIX-32	LastQty	Qty[9]	C	Quantity of current partial fill or fill message (set to 0 on all non-fills). 0 - 999,999,999	Yes	Yes	Yes	Yes	Yes
FIX-37	OrderID	String[20]	C	Unique identifier of most recent order as assigned by the Exchange. Published externally to market data feeds. Numerical up to 20 characters.	Yes	Yes	Yes	Yes	Yes
FIX-38	OrderQty	Qty[9]	Y	1 - 999,999,999	Yes	Yes	Yes	Yes	Yes
FIX-39	OrdStatus	Char[1]	Y	Status of the order: 0 = New 1 = Partially Filled 2 = Filled 3 = Done For Day 4 = Cancelled 5 = Replaced 6 = Pending Cancel 8 = Rejected C = Billable Cancel (Self Trade Prevention) E = Pending Replace M = Pending Modify	0 1 2 3 4 5 6 8 C E M	0 1 2 3 4 5 6 8 C E M	0 1 2 3 4 5 6 8 C E M	0 1 2 3 4 5 6 8 C E M	0 1 2 3 4 5 6 8 C E M
FIX-40	OrdType	Char[1]	Y	1 = Market 2 = Limit 7 = Inside Limit	1 2 7	1 2 7	1 2 7	1 2 7	1 2 7

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				9 = AutoMatch Limit P = Pegged	P	P	P	P	P
FIX-41	OrigClOrdID	String[20]	C	Returned from Order Cancel or Cancel/Replace Request. Represents the ClOrdID of the previously entered order intended for cancellation or replacement (NOT necessarily the initial order of the day). Customer defined up to 20 chars; only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark. *NYSE - for orders routed to NYSE Floor Broker Systems, if alpha characters are used for the first two consecutive characters, then one of them must be lowercase.	Yes	Yes	Yes	Yes	Yes
FIX-44	Price	Price[16]	C	0.000001-999,999,999.999999	Yes	Yes	Yes	Yes	Yes
FIX-54	Side	Char[1]	Y	1 = Buy 2 = Sell 5 = Sell Short 6 = Sell Short Exempt 8 = Cross 9 = Cross Short A = Cross Short Exempt	1 2 5 6	1 2 5 6	1 2 5 6	1 2 5 6	1 2 5 6 8 9 A
FIX-55	Symbol	String[16]	Y	Valid Equities Ticker Symbol or Options Underlying symbol.	Yes	Yes	Yes	Yes	Yes
FIX-58	Text	String[40]	N	On Incoming Messages from Firm: Freeform text field; only printable ASCII	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark. *NYSE - for orders routed to NYSE Floor Broker Systems, max length is 40 characters. However, will not be passed back in Acknowledgments or any subsequent response messages. On Outgoing Messages from Exchange: Reason code and text description for order activity, up to 40 characters. For example, reason for cancel/cancel-replace rejection.					
FIX-59	TimeinForce	Char[1]	Y	0 = Day 1 = GTC 2 = At the Opening 3 = IOC 4 = FOK 5 = GTX 6 = GTD 7 = On Close	0 2 3 7	0 2 3 7	0 2 3 7	0 2 3 7	0 2 3 7
FIX-60	TransactTime	UTC Timestamp [27]	N	On Incoming Messages from Firm: Customer application time. On Outgoing Message from Exchange: Exchange application time. UTC time, in Milliseconds	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				YYYYMMDD- HH:MM:SS.mmm					
FIX-63	SettlementType	Char[1]	N	0 = Regular Way 1 = Cash* 2 = Next Day* *Only supported on Cross Orders. If not specified, the settlement type is assumed as regular way					0 1 2
FIX-65	SymbolSfx	String[10]	N	Valid Suffix value	Yes	Yes	Yes	Yes	Yes
FIX-109	ClientID	String[4]	C	Not supported when sending to Matching Engine. NYSE Chicago - Required for orders sent to Chicago IB Firms (Brokerplex). Should be agreed upon Originator ID. *NYSE - Optional identifier for CAT SenderIMID for NYSE Floor Broker Systems, also used for Self Trade Prevention. See "Self-Trade Prevention" section of this spec for more details.	Yes*				Yes
FIX-110	MinQty	Qty[5]	N	Must be ≥ Round Lot and ≤ OrderQty	Yes	Yes	Yes	Yes	Yes
FIX-111	MaxFloor	Qty[5]	C	Must be entered in Round Lots.	Yes	Yes	Yes	Yes	Yes
FIX-114	LocateReqd	Boolean	N	N = No Y = Yes	N Y	N Y	N Y	N Y	N Y

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
FIX-150	ExecType	Char[1]	Y	0 = New 1 = Partially Filled 2 = Filled 3 = Done For Day 4 = Cancelled 5 = Replaced 6 = Pending Cancel 8 = Rejected C = Billable Cancel (Self Trade Prevention) E = Pending Cancel/Replace L = Eligible for Cross (Used for Broker Cross Orders) M = Pending Modify	0 1 2 3 4 5 6 8 C E M	0 1 2 3 4 5 6 8 C E M	0 1 2 3 4 5 6 8 C E M	0 1 2 3 4 5 6 8 C E M	0 1 2 3 4 5 6 8 C E M
FIX-151	LeavesQty	Qty[9]	C	0 - 999,999,999	Yes	Yes	Yes	Yes	Yes
FIX-386	NoTradingSessions	Int[1]	Y	1	1	1	1	1	1
FIX-336	TradingSessionID	Char[1]	Y	1 = Early Trading Session 2 = Core Trading Session 3 = Late Trading Session 4 = Early & Core Trading Sessions 5 = Core & Late Trading Sessions 6 = Early, Core, & Late Trading Sessions *Note: for symbols trading on NYSE, all values that include Core designation (Core, Early/Core, Core/Late, and Early/Core/Late) will be allowed, if the order type supports the combination on other Pillar markets. However, for each of those values, Pillar will honor the applicable trading sessions included in the instruction based on Tape (B/C symbols - Early and Core; A symbols - Core only), and ignore the other trading sessions specified in the instruction (Tape B/C symbols - Late;	1 2 4* 5* 6*	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				Tape A symbols - Early and Late)					
FIX-528	OrderCapacity	Char[1]	Y	A = Agency P = Principal R = Riskless Principal Q = Error Account *NYSE and NYSE Chicago - supported only on orders routed to NYSE Floor Broker Systems and Brokerplex	A P R Q*	A P R	A P R	A P R	A P R Q*
FIX-7928	SelfTradeType	Char[1]	N	0 (number 0) = Use current Session Configuration STP setting for the SenderCompID T = No Self Trade Prevention N = Cancel Newest O (letter O) = Cancel Oldest C = Cancel Both D = Cancel Decrement *NYSE - supported only on orders routed to matching engine; not supported on orders routed to NYSE Floor Broker Systems	0 T* N O C* D*	0 T N O C D	0 T N O C D	0 T N O C D	0 T N O C D
FIX-9202	SpecialOrdType	Char[1]	C	1 = DMM Open/Re-open/Close with or without Auction (AOC) - *drop copy only* 2 = DMM Pre-auction - *drop copy only* 3 = DMM After-auction - *drop copy only* T = QCT (DeliverToCompID must be populated with IB Firm Identifier)	1 2 3				T
FIX-9303	RoutingInst	Char[1]	C	N = Non Routable R = Routable D = Directed (Primary Only) S = Directed + Routable (PO+S)	N R	N R D S	N R D S	N R D S	N R D S

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				1 = Primary Market until 9:45 2 = Primary Market after 3:55 3 = BOTH Primary Market until 9:45 AND Primary Market after 3:55 8 = Minimum Fill (must be entered with MinQty tag populated with a non-zero value)	8	1 2 3 8	1 2 3 8	1 2 3 8	1 2 3 8
FIX-9403	OffsetPrice	Price[16]	C	Value must be zero, or otherwise: - For Market Peg order - equal to or multiple of 0.01 - For Retail Price Improvement order (optional modifier on NYSE only) - equal to or multiple of 0.001	Yes	Yes	Yes	Yes	Yes
FIX-9416	ExtendedExecInst	Char[1]	C	A = Add Liquidity Only (ALO) 0 = No trade against MPL 2 = No route to IOI 3 = No trade against MPL and no route to IOI 4 = Retail Order Type 1 5 = Retail Order Type 2 7 = Retail Provider 8 = Imbalance Offset L = Light C = Complex Order Auction 9 = Discretionary Peg D = Dark (Non-Displayed) Primary Peg I = Issuer Direct Offering (IDO)	A 4 7 8 I	A 0 8 9 D	A 0 2 3	A 0 2 3 4 5 7 8 9	A 0 2 3
FIX-9448	IntroducingBadgeID	String[4]	C	1 – 4 numeric characters NYSE - sent on executions of	Yes				

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				orders routed to NYSE Floor Broker Systems; populated with Broker badge					
FIX-9478	InterestType	Char[1]	C	Q = Q-Order		Q	Q	Q	
FIX-9426	DisplayedLiquidity Indicator	String	N	Values TBD					
FIX-9449	BillTo	String[4]	C	If the Broker will be billed for all NYSE transaction fees set value to "ALGO". Otherwise, it should be set to the firm identifier assigned to the Algo Vendor. *May be present on drop copy messages of cross allocations done by NYSE Chicago IB Firms with the following values: B - Bill R - Remote BR - Bill and Remote					Yes*
FIX-9451	ParentFirmClOrdID	String[20]	C	<= 20 chars *Present on drop copy messages of cross allocations done by NYSE Chicago IB Firms					Yes*
FIX-9453	ParentFirmMPID	String[4]	C	Firm Identifier - MPID *Present on drop copy messages of cross allocations done by NYSE Chicago IB Firms					Yes*
FIX-9479	*Reserved*	Char[1]	N	*Reserved for future use.*					
FIX-9483	DealID	String[20]	C	Unique identifier of a transaction, assigned by the Exchange to both Execution reports representing the two sides of a single trade. Numerical up to 20 characters.	Yes	Yes	Yes	Yes	Yes

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				Busts - original DealID of the transaction that is being busted or corrected. Corrections - new DealID for the corrected transaction.					
FIX-9563	*Reserved*	String[9]	N	Reserved for future use.					
FIX-9565	DOrderAuctionPrice	Price[16]	N	0.01 - 999,999.99					
FIX-9730	LiquidityIndicator	String	C	On Order Acknowledgements: 1 = Candidate for setting a new displayed bid or offer on the local market 4 = Candidate for setting a new displayed bid or offer on the local market and joining the NBBO 5 = Candidate for setting a new displayed bid or offer on the local market and setting the NBBO Note: Order Priority Update Acks will only be populated with value 0 or 1. The value 1 will be returned when the original order ack was populated with 1, 4, or 5 On Partial Fills and Fills: See Appendix for Values.	Yes	Yes	Yes	Yes	Yes
FIX-20001	AttributedQuote	Char[1]	N	0 = Not Attributed 1 = Attributed for Market Data Feeds 2 = Include in Broker Volume 3 = Attributed for Market Data Feeds, and Include in Broker Volume	0	0 1	0 1	0 1	0 1
FIX-20002	ProactiveIfLocked	Char[1]	C	0 = No locked functionality 1 = Proactive if Locked for routable orders	0	0 1	0 1	0 1	0 1

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				2 = Non-display remove liquidity for non-displayed orders locked by contraside ALOs		2	2	2	2
FIX-20003	CancelInsteadOfReprice	Char[1]	N	0 = Not applicable (follow default order behavior) 1 = Cancel order instead of repricing – for LULD only	0	0 1	0 1	0 1	0 1
FIX-20004	WorkingPrice	Price[16]	C	0.000001-999999.999999	Yes	Yes	Yes	Yes	Yes
FIX-20005	FlowIndicator	Char[1]	Y	Indicates whether a corresponding inbound message was throttled. For outgoing messages without a corresponding inbound message, the tag will default to 0. 0 = Inbound message was not throttled 1 = Inbound message was throttled	0 1	0 1	0 1	0 1	0 1
FIX-20006	WorkingAwayFromDisplay	Char[1]	C	On Order Acknowledgements, indicates whether the working price of the order is equal to or different than the display price. 0 = Working Price is equal to Display Price 1 = Working Price is different from Display Price	0 1	0 1	0 1	0 1	0 1
FIX-20007	UnsolicitedAckType	Char[1]	C	On Order Priority Update Acknowledgements, indicates the type of event that produced the unsolicited Ack. 2 = Order Priority Update – New OrderID (reserve order replenishment)	2	2	2	2	2

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				3 = Order Priority Update – Same OrderID (working price update)					
FIX-20008	ParticipantType	Char[1]	C	Sent on fills. 1 = Customer 2 = Market Maker/LMM 3 = DMM 4 = SLP 5 = NYSE Floor Broker/NYSE Chicago IB	1 2 3 4 5	1 2	1 2	1 2	1 5
FIX-20009	Nanosecond SendingTime	String[27]	Y	Time of message transmission on outgoing message from Exchange. UTC time, in Nanoseconds – YYYYMMDD-HH:MM:SS.sssssssss Note: this represents the same reference time as provided in the Standard FIX Header tag SendingTime (52), with more granular resolution.	Yes	Yes	Yes	Yes	Yes
FIX-20010	Nanosecond TransactTime	String[27]	Y	Exchange application time. UTC time, in Nanoseconds – YYYYMMDD-HH:MM:SS.sssssssss Note: this represents the same reference time as provided in the standard FIX tag TransactTime (60), with more granular resolution.	Yes	Yes	Yes	Yes	Yes
FIX-20011	RouteToBroker	Char[1]	C	Required when intending to route message to non-Matching Engine destination (i.e. NYSE					

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				Chicago Brokerplex or NYSE Floor Broker Systems) based on value provided in DelliverToCompID on incoming messages from Firm Y = Route to non-Matching Engine destination N = Route to Matching Engine If not specified, will be assumed as a value of "N", and will be routed directly to Matching Engine	Y N				Y N
FIX-20012	BrokerOMSID	String[4]	C	Present on orders from Brokerplex to Pillar to identify the Broker ID targeted by the parent order. Present on drop copy messages of cross allocations done by NYSE Chicago IB Firms					Yes
FIX-20013	SubIDIndicator	Char[1]	N	When populating both OnBehalfOfSubID (116) and SelfTradeType (7928) on an order, allows the firm to specify whether the OnBehalfOfSubID should be used or ignored for Self-Trade Prevention (STP) evaluation. See "Self-Trade Prevention" section of this spec for more details. If also using Pillar Pre-trade Risk Controls, the OnBehalfOfSubID will be used for Risk Entity purposes regardless of the value specified in this					

Tag	Field Name	Data Type	Req'd	Values	NYSE	American EQ	National	Arca EQ	Chicago
				field. 0 = for this order, use OnBehalfOfSubID (within the MPID) for STP evaluation 1 = for this order, ignore the OnBehalfOfSubID for STP (conduct STP evaluation at MPID level only) If not specified, will be assumed as a value of 0.	0 1	0 1	0 1	0 1	0 1
	Standard FIX Trailer		Y	Standard FIX Trailer	Yes	Yes	Yes	Yes	Yes

9. Appendix A: Liquidity Indicators

Pillar will populate the “LiquidityIndicator” tag (9730) on Execution Report fills. This value represents the conditions under which an order was executed and whether it added or removed liquidity from the Exchange order book. Billing rates are determined in part by this value.

Definition	Liquidity Indicator	Arca EQ	NYSE	American EQ	National	Chicago
Executions on Orders Traded Locally – Adding Liquidity (Non-Auction)						
Add Regular Limit Order	A	•	•	•	•	•
Add Sub Dollar Execution	AZ	•	•	•	•	•
Add MPL Order	AML	•	•	•	•	•
Add MPL Sub Dollar Execution	AMZ	•	•	•	•	•
Add Non-Displayed Order	AND	•	•	•	•	•
Add Non-Displayed Sub Dollar Execution	ANZ	•	•	•	•	•
Add Non-routable Limit Order – Working at different price than display price at time of execution	AB	•	•	•	•	•
Add Tracking Order	AT	•		•	•	•
Add Limit Order Setting New NBBO with Priority – Subdollar	ASPZ		•			
Add Limit Order Joining NBBO with Priority – Subdollar	AJPZ		•			
Add Limit Order Setting New NBBO with Priority	ASP		•			
Add Limit Order Joining NBBO with Priority	AJP		•			
Add Limit Order Setting New BBO	ASB	•	•	•	•	•
Add Retail Provider (TargetSubID/57 = RET)	ARE	•	•	•	•	
Add Retail Provider Sub Dollar (TargetSubID/57 = RET)	AREZ	•	•	•	•	
Add Retail Provider RPI Order	ARP	•	•			
Add MPL Retail Provider RPI Order	ARM	•				
Add Discretionary Peg Order – at prices between the same side PBBO and midpoint	ADB	•		•		
Add Discretionary Peg Order – at the midpoint	ADM	•		•		
Add Discretionary Peg Order – at the same side PBBO or below same side PBBO	ADZ	•		•		
Add d-Order when Providing Discretion	ADR		•			
Add Capital Commitment Order (NYSE DMM only)	AC		•			
Executions on Orders Traded Locally – Removing Liquidity (Non-Auction)						
Remove Regular Limit or Market	R	•	•	•	•	•
Remove Sub Dollar	RZ	•	•	•	•	•
Remove Regular Limit IOC	RI	•	•	•	•	•
Remove Sub Dollar IOC	RIZ	•	•	•	•	•

Definition	Liquidity Indicator	Arca EQ	NYSE	American EQ	National	Chicago
Remove MPL Order	RML	•	•	•	•	•
Remove Sub Dollar MPL Order	RMZ	•	•	•	•	•
Remove when executing at prices better than the contra-side NBBO - for orders qualifying as R, RI or RND	RBN	•	•	•	•	•
Remove when executing at prices better than the contra-side NBBO Sub Dollar - for orders qualifying as RZ, RIZ or RNZ	RBNZ	•	•	•	•	•
Remove Non-Displayed Order	RND	•	•	•	•	•
Remove Non-Displayed Sub Dollar Execution	RNZ	•	•	•	•	•
Remove Retail Taker Order (Retail Order Type 1, Type 2)	RRT	•	•			
Remove MPL Retail Taker (TargetSubID/57 = RET)	RRM	•	•	•	•	
Remove Discretionary Peg Order – on arrival/re-sweeping at prices other than midpoint	RDB	•		•		
Remove Discretionary Peg Order – on arrival/re-sweeping at the midpoint	RDM	•		•		
Remove Discretionary Peg Order – on arrival/re-sweeping at same side PBBO or below same side PBBO	RDZ	•		•		
Remove d-Order on Arrival/Repricing or Providing Discretion as Aggressor	RDA		•			
Executions in Opening/Re-Opening Auctions						
Market Day and MOO	OM	•	•	•		
Market Day and MOO - Sub Dollar	OMZ	•	•	•		
Limit orders and additional manual PRIN interest (NYSE DMM only)	OL	•	•	•		
Limit orders and additional manual PRIN interest (NYSE DMM only) - Sub Dollar	OLZ	•	•	•		
LOO and Opening D-Order (NYSE only)	O	•	•	•		
LOO and Opening D-Order (NYSE only) - Sub Dollar	OZ	•	•	•		
Imbalance Offset	OIO	•		•		
Sub-Dollar Imbalance Offset	OIOZ	•		•		
Executions in Closing Auctions						
Market Day and MOC	CM	•	•	•		
Market Day and MOC - Sub Dollar	CMZ	•	•	•		
Limit and Additional manual PRIN interest (NYSE DMM only)	CL	•	•	•		
Limit and Additional manual PRIN interest (NYSE DMM only) - Sub Dollar	CLZ	•	•	•		
Limit on Close orders	C	•	•	•		
Limit on Close orders - Sub Dollar	CZ	•	•	•		
Imbalance Offset on Close	CIO		•			
Imbalance Offset on Close - Sub Dollar	CIOZ		•			

Definition	Liquidity Indicator	Arca EQ	NYSE	American EQ	National	Chicago
D-Order Executed in the Close when received prior to 25 minutes before the close	CED		•			
D-Order Executed in the Close when received prior to 25 minutes before the close - Sub Dollar	CEDZ		•			
D-Order Executed when received in between 25 minutes and 3 minutes before the close	CMD		•			
D-Order Executed when received in between 25 minutes and 3 minutes before the close - Sub Dollar	CMDZ		•			
D-Order Executed in the Close when received after 3 minutes before the close	CLD		•			
D-Order Executed in the Close when received after 3 minutes before the close - Sub Dollar	CLDZ		•			
Executions on Routed Orders						
Routed – NYSE Execution	XN	•		•	•	•
Routed – NYSE American Execution	XA	•	•		•	•
Routed – NYSE Arca Equities Execution	XP		•	•	•	•
Routed – NYSE National Execution	XC	•	•	•		•
Routed - NYSE Chicago Execution	XM	•	•	•	•	
Routed to NYSE Opening/Reopening Auction	XNO	•		•	•	•
Routed to NYSE American Opening/Reopening Auction	XAO	•	•		•	•
Routed to NYSE Arca Equities Opening/Reopening Execution	XPO		•	•	•	•
Routed – Away Market Execution, Non- NYSE Group	X	•		•	•	•
Routed – NYSE Sub Dollar Execution	XNZ	•		•	•	•
Routed – NYSE American Sub Dollar Execution	XAZ	•	•		•	•
Routed – NYSE Arca Equities Sub Dollar Execution	XPZ		•	•	•	•
Routed – NYSE National Sub Dollar Execution	XCZ	•	•	•		•
Routed – NYSE Chicago Sub Dollar Execution	XMZ	•	•	•	•	
Routed – Away Market Sub Dollar Execution, Non- NYSE Group	XZ	•		•	•	•
Routed – NASDAQ Execution	XQ		•			
Routed – BATZ	XZ		•			
Routed – NASDAQ BX	XB		•			
Routed – FINRA ADF	XD		•			
Routed – EDGA	XJ		•			
Routed – EDGX	XK		•			
Routed – NASDAQ PSX	XX		•			
Routed – BATY	XY		•			
Routed – IEX	XV		•			
Routed – LTSE	XL		•			

Definition	Liquidity Indicator	Arca EQ	NYSE	American EQ	National	Chicago
Routed – MEMX	XU		•			
Routed – MIAX	XH		•			
Routed – NASDAQ Sub Dollar	XQZ		•			
Routed – BATZ Sub Dollar	XZZ		•			
Routed – NASDAQ BX Sub Dollar	XBZ		•			
Routed – FINRA ADF Sub Dollar	XDZ		•			
Routed – EDGA Sub Dollar	XJZ		•			
Routed – EDGX Sub Dollar	XKZ		•			
Routed – NASDAQ PHLX Sub Dollar	XXZ		•			
Routed – BATY Sub Dollar	XYZ		•			
Routed – IEX Sub Dollar	XVZ		•			
Routed – LTSE Sub Dollar	XLZ		•			
Routed – MEMX Sub Dollar	XUZ		•			
Routed – MIAX Sub Dollar	XHZ		•			
Primary Only to NYSE						
Primary Only Executed in Opening/Reopening	XNO	•		•	•	•
Primary Only Adding Liquidity	XNA	•		•	•	•
Primary Only Removing Liquidity	XN	•		•	•	•
Primary Only Routed from Primary	XNW	•		•	•	•
Primary Only MOC/LOC	XNC	•		•	•	•
945/355 Executed on Primary	XNT	•		•	•	•
945/355 Executed on Primary - Retail	XNRT	•		•	•	
Primary Only Sub Dollar	XNZ	•		•	•	•
Primary Only to NYSE American						
Primary Only Executed in Opening/Reopening	XAO	•	•		•	•
Primary Only Adding Liquidity	XAA	•	•		•	•
Primary Only Removing Liquidity	XA	•	•		•	•
Primary Only Routed from Primary	XAW	•	•		•	•
Primary Only MOC/LOC	XAC	•	•		•	•
945/355 Executed on Primary	XAT	•			•	•
945/355 Executed on Primary - Retail	XART	•			•	
Primary Only Sub Dollar	XAZ	•	•		•	•
Primary Only to NYSE Arca Equities						
Primary Only Executed in Opening/Reopening	XPO		•	•	•	•
Primary Only Adding Liquidity	XPA		•	•	•	•
Primary Only Removing Liquidity	XP		•	•	•	•
Primary Only Routed from Primary	XPW		•	•	•	•

Definition	Liquidity Indicator	Arca EQ	NYSE	American EQ	National	Chicago
Primary Only MOC/LOC	XPC		•	•	•	•
945/355 Executed on Primary	XPT			•	•	•
945/355 Executed on Primary - Retail	XPRT			•	•	
Primary Only Sub Dollar	XPZ		•	•	•	•
Primary Only to Away Market, Non- NYSE Group						
Primary Only Adding/Removing Liquidity	XDA	•		•	•	•
945/355 Executed on Primary	XDT	•		•	•	•
945/355 Executed on Primary Retail	XDRT	•		•	•	
Primary Only Sub Dollar	XDZ	•		•	•	•
Primary Only to NASDAQ						
Primary Only Adding/Removing Liquidity	XQA		•			
945/355 executed on Primary	XQT					
945/355 executed on Primary - Retail	XQRT					
Primary Only Sub Dollar	XQZD		•			
Primary Only to BATZ						
Primary Only Adding/Removing Liquidity	XZA		•			
945/355 executed on Primary	XZT					
945/355 executed on Primary - Retail	XZRT					
Primary Only Sub Dollar	XZZD		•			
Primary Only to IEX						
Primary Only Adding/Removing Liquidity	XVA		•			
945/355 executed on Primary	XVT					
945/355 executed on Primary - Retail	XVRT					
Primary Only Sub Dollar	XVZD		•			
Primary Only to LTSE						
Primary Only Adding/Removing Liquidity	XLA		•			
945/355 executed on Primary	XLT					
945/355 executed on Primary - Retail	XLRT					
Primary Only Sub Dollar	XLZD		•			
Cross Order Execution						
Limit IOC Cross (Cross Execution only)	Z					•
Participated in NYSE Floor Broker Cross Execution	ZB		•			
Participated in NYSE Floor Broker Cross Execution Sub Dollar	ZBZ		•			
Limit QCT Cross	ZT					•

Definition	Liquidity Indicator	Arca EQ	NYSE	American EQ	National	Chicago
Limit QCT Cross Sub Dollar	ZTZ					•

NYSE - for orders routed to NYSE Floor Broker Systems, the following values are also supported:

Definition	Liquidity Indicator	Arca EQ	NYSE	American EQ	National	Chicago
Taker	1		•			
Provider	2		•			
Blended	3		•			
Market on Close and Market Orders Executed in Close	4		•			
Opening/Provider	5		•			
Closing customer execution, or dQuote executed in Close if received between 3:35 – 3:57 pm* *For days on which the market closes early, this time will be adjusted accordingly (between 25 and three minutes before the close)	6		•			
Limit on Close	7		•			
RLP - Retail Order Provider	8		•			
RLP - Retail Order Taker	9		•			
RLP - Retail Taker MPL	10		•			
Taker MPL	11		•			
Provider MPL	12		•			
RET – Retail Firm Provider	13		•			
RET – Retail Firm MPL Taker	14		•			
Closing Offset	15		•			
Closing early D-Quote (received prior to 3:35 PM)* *For days on which the market closes early, this times will be adjusted accordingly (25 minutes before the close)	16		•			
Closing late D-Quote (received after 3:57 pm)* *For days on which the market closes early, this times will be adjusted accordingly (three minutes before the close)	17		•			
Participated in NYSE Floor Broker Cross execution	18		•			
Billed to Algorithm Provider	ALGO		•			
Routed - IOI/Ping	XI		•			
Routed - IOI/Ping Sub Dollar	XIZ		•			

10. Appendix B: Pillar Reason Codes

Reason Codes Returned as Text on Outgoing Messages

Pillar will return a set of event reason codes and descriptions as text (Tag 58) on Execution Reports and Cancel Reject messages. These codes are provided by Pillar and qualify the event that produced the message.

NYSE Chicago: the text may be different for outgoing messages generated by Brokerplex (the system that handles messages that are routed to Chicago IB firms).

Format: Text (Tag 58) = 'Rxxx: Description'

Reason Code	Description	Reason Code	Description
0	OK	27	Invalid StopPx
1	Invalid SenderCompID	28	Invalid Client ID
2	Invalid SenderSubID	29	Invalid MinQty
3	Invalid SendingTime	30	Invalid MaxFloor
4	Invalid TargetCompID	31	Invalid LocateReqd
5	Invalid TargetSubId	32	Invalid ExpireTime
6	Invalid OnBehalfOfCompID	33	Invalid SecurityType
7	Invalid OnBehalfOfSubID	34	Invalid MaturityMonthYear
8	Invalid DeliverToCompID	35	Invalid PutOrCall
9	Invalid DeliverToSubID	36	Invalid StrikePrice
10	Invalid Account	37	Invalid CoveredOrUncovered
11	Invalid ClOrdID	38	Invalid CustomerOrFirm
12	Invalid ExecInst	39	Invalid MaturityDay
13	Invalid IDSource	40	Invalid PegDifference
14	Invalid OrderQty	41	Invalid SellersDays
15	Invalid OrdType	42	Invalid TradingSessionID
16	Invalid Price	43	Invalid NoTradingSessions
17	Invalid Order Capacity	44	Invalid DiscretionInst
18	Invalid Security ID	45	Invalid DiscretionOffset
19	Invalid Side	46	Invalid PriceType
20	Invalid Symbol/Series	47	Invalid ClearingFirm
21	Invalid Text	48	Invalid ClearingAccount
22	Invalid TimeInForce	49	Invalid PartyID
23	Invalid Settlement Type	50	Invalid Optional Data
24	Invalid FutSettDate	51	Invalid CrossID
25	Invalid SymbolSfx	52	Invalid StrategyIndicator
26	Invalid Open/Close	53	Invalid TradeID

Reason Code	Description	Reason Code	Description
54	Invalid NoSelfTrade	87	Invalid StockLegGiveUp
55	Invalid CAPStrategy	88	Invalid NoLegs
56	Invalid SpecialOrdType	89	Invalid LegPositionEffect
57	Invalid RoutingInst	90	Invalid LegSymbol
58	Invalid OffsetPrice	91	Invalid LegCFICode
59	Invalid ExtendedExecInst	92	Invalid LegMaturityDate
60	Invalid IntroducingBadgeID	93	Invalid LegStrikePrice
61	Invalid BillTo	94	Invalid LegContractMultiplier
62	Invalid ParentFirmClOrdID	95	Invalid LegRatioQty
63	Invalid ParentFirmExchangeOrdID	96	Invalid LegSide
64	Invalid ParentFirm	97	Invalid LegRefID
65	Invalid InterestType	98	Unsupported Order Type
66	Invalid DisplayInd	99	UROUT
67	Invalid PegInd	100	Primary Market Not Available
68	Invalid CeilingFloorPrice	101	No NBBO/PBBO for Peg
69	Invalid MinPegQty	102	No Market for Market Order
70	Invalid DOrderAuctionPrice	103	Marketable Price
71	Invalid DiscMaxVol	104	Done for Day
72	Invalid DicsRouteInd	105	Credit Limit Violation
73	Invalid MinimumTriggerVol (MTV)	106	Cancel Remaining IOC
74	Invalid Attributed Quote	107	Too Late to Cancel
75	Invalid Proactive If Locked	108	InvalidPossResend
76	System not available	109	Cancel Pending
77	System full (MENG_RATE_EXCEEDED)	110	Symbol/Series already opened
78	Throttle Reject	111	Firm Bulk Cancel
79	Symbol/Series Halted	112	OnBehalfOfCompID Blocked
80	No symbol/series permission	113	ClearingFirm Blocked
81	Price Too Far Outside	114	Cancel/Replace Pending
82	MWCB Halt	115	Modify Pending
83	Market Closed	116	Cannot Flip Imbalance
84	Symbol/series Closed	117	Cannot Increase Imbalance
85	LULD Cancel Instruction	118	Pending Cancel - Imbalance Freeze
86	No Price Slide Inst During SSR	119	Pending Replace - Imbalance Freeze

Reason Code	Description	Reason Code	Description
120	Pending Modify - Imbalance Freeze	152	SSH Price below NBB on ISO
121	Pending Cancel - Routed Interest	153	IOC Received while Auction Running
122	Pending Replace - Routed Interest	154	Pending - Symbol Transition
123	Pending Modify - Routed Interest	155	Pending Cancel - Symbol Transition
124	Pending - Auction Running	156	Pending Modify - Symbol Transition
125	Duplicative Order Check	157	Pending Replace - Symbol Transition
126	Cancelled by Exchange	158	Invalid For Tick Pilot
127	New Order	159	Invalid MMID
128	Fill	160	Invalid MPID
129	Partial Fill	161	Invalid CancelInsteadOfReprice
130	Reduced	162	Invalid RetailIndicator
131	Replaced	163	SenderCompID Not Active
132	No Market for Cross	164	MPID Blocked
133	STP Cancel*	165	Invalid Timestamp
134	Invalid PossDupe	166	Invalid Permission for SenderCompID
135	TPID Blocked	167	Invalid UserData
136	Invalid Bulk Cancel	168	Pillar Risk Mitigation
137	Pending Bulk Cancel	169	No Last Sale for Peg
138	Symbol/Series Not Open	170	Symbol Pending Closing Auction
139	Symbol/Series Suspended	171	Extreme Closing Order Imbalance
140	Symbol IPO Halt	172	Invalid Multi-Message
141	Invld Inst During Imbalance Freeze	173	Invalid Request Targeting Manual SenderCompID
142	Invld Inst After Cutoff Time	174	Invalid DMMRejectReason
143	Cancelled by Primary Market	175	Pending - Pending Auction State
144	Pending - Imbalance Freeze	176	Pending Cancel – Pending Auction State
145	No RLP Permission	177	Pending Modify – Pending Auction State
146	Invalid Instruction for IOC's	178	Pending Replace – Pending Auction State
147	System full (CG_RATE_EXCEEDED)	179	Cancelled - DMM Manual Order Re-price
148	Pending Cancel - Auction Running	180	Too early to open
149	Pending Modify - Auction Running	181	Too early to close
150	Pending Replace - Auction Running	182	Symbol not frozen by Auction Request
151	Invld Inst for Pending Order	183	Symbol is frozen by DBK GUI

*Format for STP Cancel is Text (Tag 58) = 'R133:STP...' where … = the ClOrdID of the contra-side order that caused the cancellation.

Reason Code	Description	Reason Code	Description
184	Too Late - Auction Running	218	DMM GUI Reduction in Manual Order Qty
185	Too Late - Symbol Transition	219	Cross Eligible
186	No Eligible Crossing Interest	220	Dry Run
187	Book is locked/crossed	221	Unsupported by BrokerPlex
188	No interest exists	222	Cross Blocked by BBO/PBBO
189	Imbalance too large	223	Risk - Single Ord Max Qty
190	SSH price below SSR filing price	224	Risk - Single Ord Max Notional
191	Symbol Already Closed	225	Risk - Gross Credit Breach
192	Opening template opened	226	Risk - Kill Switch
193	Closing template opened	227	Invalid RouteToBroker
194	PRIN entered on auction template	228	Spread Too Wide
195	Mandatory Indication submitted	229	Expire FOK
196	Pending Crowd exists	230	Locks displayed interest
197	No consolidated last sale	231	MMQuote Price lock/cross contra side NBBO
198	Paired qty exceeds max trade parameter	232	Invalid Leg Symbol
199	LULD or MWCB timer running	233	Duplicate Leg Symbol
200	Locking/Crossing Away Quote	234	Symbol Not In Underlying
201	Cross Not Eligible	235	Leg ratios not in the most reduced form
202	*Reserved for future use*	236	Option leg ratio too high
203	Pending Acceptance (for Ack on order arrival)	237	Stock leg ratio too low
204	Rejected Cancel by DMM	238	Complex series already exists
205	Cancelled by DMM	239	Number of legs incorrect
206	Price is outside allowable range	240	Cancel - does not set NBBO inst
207	Auction Validation In Progress	241	Cancel - avoid reprice inst
208	Invalid ManualActionID	242	Allow reprice once, then cancel inst
209	Invalid AuctionSellIndicator	243	Invalid AllocationPct
210	Invalid IntradaySellShortQty	244	InvalidMMQuoteType
211	Indication Template is Open	245	Invalid MMSentTime
212	No Prev Closing Price	246	Series Expired
213	Cancelled due to Trading Collars	247	Invalid GiveUpMMID
214	Underlying is in LULD State	248	Invalid NoSides
215	Invalid ManualResponseType	249	*Reserved for future use*
216	No NYSE last sale	250	*Reserved for future use*
217	Symbol Direct Listing State	251	Invalid BulkAction

Reason Code	Description	Reason Code	Description
252	Invalid CancelScope	283	Invalid CountLimit
253	No Legal Width Spread	284	Risk - Roll Transact Breach
254	Invalid TargetCancelMPID	285	Risk - Roll Vol Breach
255	Invalid TargetCancelSender CompID	286	Risk - Roll Pct Breach
256	Clear the Book Prev. Entered	287	Risk - Roll GRMP Breach
257	Timer Expired - API Allocation	288	Risk - MM Arbitrage Breach
258	Invalid Number of Quotes	289	Risk - MM Intrinsic Breach
259	Invalid OrderID	290	IDO Must Exist
260	Risk Control Event	291	Invalid Allocation tag <insert invalid tag number>
261	TO Rejected	292	Invalid Trade tag <insert invalid tag number>
262	Cancelled - Corporate Action	293	Arbitrage Check
263	Too Late to Replace	294	Intrinsic Value Check
264	Invalid RefDelta	295	Credit Debit Check
265	Invalid StockPrice	296	Invalid Risk User
266	*Reserved for future use*	297	Invalid Risk Entity
267	Invalid TiedToStock	298	Invalid Flex Series Already Exists
268	Too Late to Allocate	299	Invalid Flex Series Key
269	Customer Interest on BBO	300	Invalid Clear the Book
270	IDO Cannot be Modified	301	Invalid StockQty
271	Cross Outside BBO	302	Invalid PackageLinkID
272	Pending TO Approval	303	Complex Max Series Breach
273	Invalid LegOpenClose	304	Invalid Flex EOD tag <insert invalid tag number>
274	Invalid RiskControlType	305	Invalid PercentagePrice
275	Invalid RiskControlActivation	306	Invalid PercentageStrike
276	Invalid BreachActionRequest	307	Cancel Remaining GTX
277	Invalid IOCAttribution	308	COA Not Running
278	Invalid RiskActionType	309	Invalid OrdStatus
279	Invalid USDLimit	310	MMID Blocked
280	IDO Already Exists	400	Repriced
281	Invalid TimeLimit	800	Broker Reject
282	Invalid PercentageLimit	999	Unknown Issue Encountered

*Format for NYSE Floor Broker Systems and Brokerplex response is Text (Tag 58) = ‘R800: *Description of Reason*’ where *Description of Reason* = various text provided by the system.

11. Appendix C: Order Types

An inventory of the order types and modifiers available to firms via the Pillar FIX Gateway is available at the web link below:

https://www.nyse.com/publicdocs/NYSE_Pillar_FIX_Gateway_Order_Type_Matrix.pdf

The document provides the following information:

- **Order Type Key** – the unique tags and values used to identify each major order type.
- **Order Validation** – a list of valid order modifiers for each order type.

Note: This document is provided for informational purposes only, and the Exchange reserves the right to change the format and/or scope of the document at any time.

General guidelines for reading the document:

- Each column corresponds to a specific order type.
- Each row corresponds to a tag, and specifies a reject code (Rxxx) to be used if the entered value does not conform to the specification.
    - The top portion of the document corresponds to the primary key tag values that uniquely identify an order type
    - The bottom portion of the document corresponds to secondary tag values in the protocol that may be sent on various order types
- Each cell is a comma-separated list of the possible values for the given order type and field combination.
    - The values shown represent the superset that is available across all NYSE Group markets
    - To determine applicability of each value by market, refer to the message formats in this gateway specification. For each message type, the market-specific columns indicate the available values

Legend:

- **Tag that is required and can only have specific values** (example: a, b, c) – is represented with a cell 'a,b,c'. All other values will result in a reject with Pillar Reason Code Rxxx
- **Tag that is required but has a customer-specific or customer defined value** – is represented with a cell 'Req'
- **Tag that is optional and can either have specific values or not be sent** – is represented with a cell 'a,b,c,null'. All other values will result in a reject with Pillar Reason Code Rxxx
- **Tag that is optional but has a customer-specific or customer defined value and if provided, that value must pass format validation** – is represented with a cell 'null,*' or a cell '0,*'
- **Tag that must not be sent** – is represented with a cell 'null'. All other values will result in a reject with Pillar Reason Code Rxxx

12. Appendix D: Field/Value Applicability - by Participant & Symbol

In addition to differences between markets denoted throughout this specification, within a given market there are certain fields and values applicable only to a subset of participants and/or symbols (Tape A or Tape B/C).

		NYSE				
Description	**Field Name/Value**	**Customer/ Market Maker or Service Bureau - to Matching Engine**	**Customer/ Market Maker or Service Bureau - to NYSE Floor Broker Systems**	**Designated Market Maker (DMM)**	**Tape - A Symbols**	**Tape - B/C Symbols**
Order Entry from Firm to Exchange - fields/values marked as "No" will be rejected						
ExecInst	ExecInst (18)	Yes	No	Yes	Yes	Yes
Market Order	OrdType (40) = 1	Yes	Yes	No	Yes	Yes
Inside Limit Order	OrdType = 7	Yes	No	No	Yes	Yes
Limit On Close	OrdType (40) = 2 with TimeInForce (59) = 7	Yes	Yes	No	Yes	Yes
SenderSubID	SenderSubID (50)	Yes	No	Yes	Yes	Yes
ClientID	ClientID (109)	No	Yes	No	Yes	Yes
MinQty	MinQty (110)	Yes	No	Yes	Yes	Yes
MaxFloor	MaxFloor (111)	Yes	No	Yes	Yes	Yes
Trading Session Designation - Early	TradingSessionID (336) = 1	Yes	Yes	No	No	Yes
Trading Session Designation - Late	TradingSessionID (336) = 3	No	No	No	No	No
SelfTradeType - explicit instruction for No Self Trade Prevention	SelfTradeType (7928) = T	Yes	No	Yes	Yes	Yes
ExtendedExecInst - overall support for field/tag	ExtendedExecInst (9416)	Yes	No	Yes	Yes	Yes
ExtendedExecInst - Retail Order Type 1	ExtendedExecInst (9416) = 4	Yes	No	No	Yes	Yes
ExtendedExecInst - Imbalance Offset (On Close)	ExtendedExecInst (9416) = 8	Yes	No	No	Yes	No
SpecialOrdType	SpecialOrdType (9202)	No	No	Yes	Yes	No
RoutingInst	RoutingInst (9303)	Yes	No	Yes	Yes	Yes
InterestType	InterestType (9478)	No	No	Yes	Yes	No
Response Messages from Exchange to Firm - fields/values marked as "No" will not be sent						
Trade Corrections	ExecTransType (20) = 2	No	Yes	No	Yes	Yes

		NYSE				
Description	**Field Name/Value**	**Customer/ Market Maker or Service Bureau - to Matching Engine**	**Customer/ Market Maker or Service Bureau - to NYSE Floor Broker Systems**	**Designated Market Maker (DMM)**	**Tape - A Symbols**	**Tape - B/C Symbols**
OrdStatus - Pending Modify	OrdStatus (39) = M *Instead, will be sent as E - Pending Replace	Yes	No*	Yes	Yes	Yes
LocateReqd	LocateReqd (114)	Yes	No	Yes	Yes	Yes
OffsetPrice	OffsetPrice (9403)	Yes	No	Yes	Yes	Yes
IntroducingBadgeID	IntroducingBadgeID (9448)	No	Yes	No	Yes	Yes
AttributedQuote	AttributedQuote (20001)	Yes	No	Yes	Yes	Yes
ProactiveIfLocked	ProactiveIfLocked (20002)	Yes	No	Yes	Yes	Yes
CancelInsteadOf Reprice	CancelInsteadOf Reprice (20003)	Yes	No	Yes	Yes	Yes
FlowIndicator - value to indicate "corresponding inbound message was throttled"	FlowIndicator (20005) = 1 *Instead, will be sent as 0 regardless of whether or not the corresponding inbound message was throttled	Yes	No*	Yes	Yes	Yes
UnsolicitedAckType	UnsolicitedAckType (20007)	Yes	No	Yes	Yes	Yes
ParticipantType - NYSE Floor Broker	ParticipantType (20008) = 5	No	Yes	No	Yes	Yes
SubIDIndicator	SubIDIndicator (20013)	Yes	No	Yes	Yes	Yes

13. Document Version History

Date	Spec Version #	Change Summary
February 17, 2022	4.9	Added support for: - NYSE - Inside Limit order - OrdType (FIX-40) = 7 (Inside Limit); updated Appendix D with Inside Limit details - NYSE Arca Equities - Discretionary Peg order - ExtendedExecInst (FIX-9416) = 9 (Discretionary Peg)

		Added new section - Maximum Order Price and Quantity Self-Trade Prevention - added details regarding orders routed to NYSE Floor Broker Systems. Logon message - RawData (FIX-96) - clarified that session configuration changes will be persisted for the length of the trading day or until the next time Pillar restarts. Cancel on Disconnect and Bulk Cancel - clarified that on NYSE, MOC/LOC orders for primary symbols are excluded from cancellation after 3:50 PM (added time reference). Prohibited characters in freeform text fields - added guidance regarding character restrictions in the following fields: - ClOrdID (11) - OrigClOrdID (41) - Text (58) - OnBehalfOfSubID (116) Text (FIX-58) - clarified that for orders routed to NYSE Floor Broker Systems, max length is 40 characters. TargetSubID (FIX-57) - added support for value "RET" (to designate an order as eligible for retail execution billing) on NYSE American Equities and NYSE National. Appendix A - added support for the following liquidity indicators by market: - NYSE Arca Equities - ADB, ADM, ADZ, RDB, RDM, RDZ - NYSE American Equities & NYSE National - ARE, AREZ, RRM, XNRT, XPRT, XDRT - NYSE National - XART Appendix B: - Added new codes: 191, 213-214, 228 - 269, 271-279, 281-289, 291-310, 400, 800 - Removed codes: 900-906 - Updated text of the following codes to cover options series in addition to equities symbol (“symbol/series” instead of “symbol”): 20, 79, 80, 84, 110, 138, 139
December 9, 2020	4.8	NYSE - added support for: - SelfTradeType (7928) = C (Cancel Both) - SelfTradeType (7928) = D (Cancel Decrement) Clarifications for order routing to NYSE Floor Broker Systems: - ClientID (109) - added details regarding CAT SenderIMID - SelfTradeType (7928) = T, C, and D are not supported - Trade Corrections are supported - ExecTransType (20) = 2
October 28, 2020	4.7	Added support for Issuer Direct Offering (IDO) order: - ExtendedExecInst = I - Excluded from cancel on disconnect; bulk cancel

		- Pillar Reason Codes 270, 280, 290 Clarifications for order routing to NYSE Floor Broker Systems: - OrderCapacity (528) = Q (error account) is supported - Liquidity Indicators (Appendix) - added XI and XIZ for routed to IOI/Ping - BrokerOMSID (20012) - updated as not applicable for NYSE
August 3, 2020	4.6	Introduced support for order routing to NYSE Floor Broker Systems: - Account (1), ClOrdID (11), OrigClOrdID (41), Text (58) - updated to indicate list of printable characters that must not be sent, else will be rejected - LastMkt (30) - added value "ALGO" for algorithm away market executions - Cancel on Disconnect (RawData/tag 96) - both orders in the matching engine and orders routed to NYSE Floor Broker Systems will be cancelled if session is subscribed to cancel on disconnect - Order Cancel Request - added details regarding single and bulk cancellation of orders routed to the matching engine and NYSE Floor Broker Systems - Order Cancel/Replace Request - added details regarding combination of tags that must be populated the same way on a Cancel/Replace Request compared to original order routed to NYSE Floor Broker Systems - Self-Trade Prevention (STP) section, ClientID (109) - NYSE - STP evaluation may be conducted for orders routed to NYSE Floor Broker Systems using either MPID or ClientID - OnBehalfOfSubID (116) - may optionally be populated with mnemonic - DeliverToCompID (128) - values entered for NYSE Floor Broker Agency ID or Badge must not be "zero padded" to fill the max length of the tag - IntroducingBadgeID (9448) - added support (Execution Report only) - ParticipantType (20008) - added support for 5 = NYSE Floor Broker - RouteToBroker (20011) - added support - Field/Value Applicability by Participant Type & Symbol (Appendix) - updated to indicate fields/values that firms must not send on orders routed to NYSE Floor Broker Systems else will be rejected, and fields/values that NYSE Floor Broker Systems will not send on response messages to firms - Liquidity Indicators (Appendix) - added new values - Mapping Orders and Executions to NYSE XDP Market Data section - on response messages for orders routed to NYSE Floor Broker Systems, the OrderID and TradeID values will not correlate with NYSE XDP Market Data Updated support for orders routed to NYSE Chicago Brokerplex: - Cancel on Disconnect (RawData/tag 96) - both orders in the matching engine and orders routed to Brokerplex will be cancelled if session is subscribed to cancel on disconnect - Order Cancel Request - added details regarding single and bulk cancellation of orders routed to the matching engine and Brokerplex - Order Cancel/Replace Request - added details regarding combination of tags that must be populated the same way on a Cancel/Replace Request compared to original order routed to Brokerplex

		Message Throttling section - eliminated throttle formula that approximated a point in time when messages arrived during the previous 100 milliseconds, in favor of a true 100 millisecond rolling window LiquidityIndicator (9730) - added support for pre-liquidity indicator values 4 (Candidate for setting a new displayed bid or offer on the local market and joining the NBBO) and 5 (Candidate for setting a new displayed bid or offer on the local market and setting the NBBO) Liquidity Indicators (Appendix) - added new NYSE liquidity indicators for executions of orders routed to MEMX (XU, XUZ); MIAX (XH, XHZ); LTSE (XL, XLZ, XLA, XLT, XLRT, XLZD) Pillar Reason Codes (Appendix) - added new codes 200, 223-227, 800
May 11, 2020	4.5	Added support for tag 20013 - SubIDIndicator.
November 4, 2019	4.4	NYSE American - added support for values to be introduced on a date announced via Trader Update: - ExtendedExecInst field (9416) - added A = Add Liquidity Only (ALO) as a valid value - ProactiveIfLocked field (20002) - added 2 = Non-display Remove liquidity as a valid value
October 31, 2019	4.3	Increased length of Text field (58) to the following values: - Logon, Logout, Session-Level Reject messages - to 100 characters - New Order Single, Order Cancel/Replace Request messages - to 80 characters Added details on FIX drop copy messages for cross allocations on NYSE Chicago: - Provided detail in FIX Drop Copies section - Updated applicable fields for NYSE Chicago in execution report based on their presence in cross allocation FIX drop copy messages: BillTo (9449), ParentFirmMPID (9453), ParentFirmClOrdID (9451)
October 17, 2019	4.2	NYSE Chicago: - Execution Report - in DealID field, updated description for busts and corrections - ExecInst field (18) - removed v = Options/Futures Related; will not be supported - SpecialOrdType field (9202) - for value T = QCT, added clarification that DeliverToCompID must be populated with IB Firm Identifier - Further Details on NYSE Chicago related identifiers in TargetSubID (57) and OnBehalfOfSubID (116) - Participant Type field (20008) - added value of 5 and removed value of 2 - ClientID (109) is required when sending to NYSE Chicago IB Firms Liquidity Indicators (Appendix) - added support for new indicators RBN/RBNZ for all markets on a date announced via Trader Update; added back missing indicators OIO/OIOZ, previously removed in error. Designated Limit Cross - IOC for elimination on NYSE Arca Equities, NYSE American Equities, and NYSE National on a date announced via Trader Update.

<table>
<tr><td>September 5, 2019</td><td>4.1</td><td>FIX Header - corrected description of OnBehalfOfSubID (116) to indicate that the value provided by the firm on the incoming message to the Exchange is echoed back in the same tag on outgoing messages from the Exchange to the firm. Removed DeliverToSubID (129) as this tag is not currently used in Pillar FIX Gateway protocol.

Cancel Request - removed bulk cancel value 0 from field OrderID (37), as this is not a valid value.

Liquidity Indicators (Appendix):
- Merged the updated liquidity indicators for “Executions in Opening/Re-opening Auctions” and “Executions in Closing Auctions” from addendum table into main table. Removed designation that these codes will be introduced “beginning on a date announced via Trader Update” as they have since been implemented.
- Corrected the indicators for “additional manual PRIN interest - NYSE DMM only” as OL and “additional manual PRIN interest - NYSE DMM only - Sub Dollar” as “OLZ.”

Corrected the cancel cutoff time for Primary Close Only Market/Limit (PO + MOC/LOC) orders for NYSE symbols - 3:50 PM.

NYSE Chicago:
- Included additional values in LastMkt field if receiving execution report messages from Brokerplex
- Added ClientID to execution report message (was previously added to New Order - Single and Order Cancel/Replace Request messages)
- Added RouteToBroker field (FIX-20011) to support routing orders to Brokerplex

OffsetPrice - updated description to cover both Market Peg and Retail Price Improvement (optional modifier on NYSE only).</td></tr>
<tr><td>June 17, 2019</td><td>4.0</td><td>Added support for NYSE Chicago throughout all data structures and sections of the document, including the following:
- SpecialOrdType supported on Inbound Messaging from firms to support QCT entry
- Added SettlementType tag to support Non-Regular Way Settlement on Cross Orders
- Added ClientID tag to support Institutional Broker workflows
- Included details in DeliverToCompID to facilitate routing order orders to Institutional Brokers
Appendix B, “Pillar Reason Codes”:
- Updated R191, R202, R213, and R214 as reserved for future use
- Added R212: No Prev Closing Price, R220: Dry Run, R221: Unsupported by BrokerPlex, and R222: Cross Blocked by BBO/PBBO</td></tr>
<tr><td>March 29, 2019</td><td>3.2</td><td>Pillar Gateway support for NYSE:
- Appendix “Liquidity Indicators” - added codes for Executions on Routed Orders; Primary Only to NASDAQ; Primary Only to BATZ; Primary Only to IEX
- TradingSessionID (336) - added clarification for NYSE, that all values that include Core designation (Core, Early/Core, Core/Late, and Early/Core/Late) will be allowed, but only if the order type supports the combination on</td></tr>
</table>

		- other Pillar markets. See field description for how the values are processed based on Tape of the Symbol - Appendix “Pillar Reason Codes” - updated text for code 171; added codes 184+ - Added FIX tag 9202 - SpecialOrdType - for NYSE DMM drop copy of Opening/Re-opening/Closing with and without Auction, Pre-auction order instruction, and After-auction order instruction Clarification that MMID must be provided along with its associated MPID on Market Maker, LMM, SLP, SLMM and DMM orders intended to receive credit for satisfying their market making/liquidity obligations. RountingInstruction (9303) - changed description of the value for “Routable IOC” to “Routable” for greater flexibility in future use.
January 14, 2019	3.1	Appendix B, “Pillar Reason Codes” - updated text for R065 to “Invalid InterestType”; R070 to “Invalid DOrderAuctionPrice.” Clarification that MMID must be provided on all market maker orders.
November 19, 2018	3.0	Liquidity Indicators (Appendix) - added supplemental table with planned changes for Opening/Re-opening and Closing auction liquidity indicators on all Pillar markets with auction eligible securities - NYSE Arca Equities, NYSE American Equities, and NYSE. Pillar Gateway support for NYSE, general: - Throughout spec, updated field/value applicability for NYSE market - Eliminated business descriptions of the following fields; updated as reserved for future use - MinPegQty (9563), DisplayInd (9479) - Re-named QuoteType as InterestType (9478) - Introduced new value to the following field: o ExecInst (18) - added support for Last Sale Peg - Liquidity Indicators (Appendix) o Updated value applicability for NYSE market o Introduced new values - ASPZ, AJPZ, ASP, AJP, ADR, AC, RDA, ZB, ZBZ - Pillar Reason Codes (Appendix) - added new reason codes 169+ - Added new Appendix - Order Type/Modifier Applicability by Participant & Symbol - Bulk Cancel Request and Cancel on Disconnect - updated list of exclusions for order cancellation Denoted changes to protocol support for the following markets beginning on a date announced via Trader Update - NYSE Arca Equities and NYSE National - introduction of Minimum Fill (via RoutingInstruction)
May 24, 2018	2.1	Added new Liquidity Indicators for NYSE Arca Equities (Appendix) - Add Retail Provider Sub Dollar (AREZ); 945/355 Executed on NYSE Retail (XNRT); 945/355 Executed on NYSE American Retail (XART); 945/355 Executed on Away Market Non-NYSE Group (XDRT).
February 8, 2018	2.0	Added protocol support for NYSE National.
October 3, 2017	1.10	Updated message throttle rate to 500 messages/100 milliseconds. Updated protocol support for NYSE Arca Equities and NYSE American Equities – new

		ExtendedExecInst (9416) value 8 = Imbalance Offset. New liquidity indicators for NYSE Arca Equities and NYSE American in support of Imbalance Offset order.
September 14, 2017	1.9	Updated protocol support for NYSE American Equities – new RoutingInst (9303) value 8 = Minimum Fill (must be entered with MinQty tag populated with a non-zero value)
July 17, 2017	1.8	Added implementation detail in section Message Throttling. Removed duplicate entries of liquidity indicators AND, RND for Dark Primary Peg, and simplified original descriptions to be applicable to non-displayed orders in general (including Dark Primary Peg), in Appendix.
June 22, 2017	1.7	Added New Liquidity Indicators for NYSE American Equities – in support of Discretionary Peg Order and Dark Primary Peg Order. Updated references of “Arca/American/NYSE Only” order to “Non-Routable Limit Order” (for NYSE Arca Equities, still known as Arca Only Order pending official name change).
May 16, 2017	1.6	Updated protocol support for NYSE American Equities – removed MinPegQty (9563) and DiscPriceRng (9565)
April 12, 2017	1.5	Updated protocol support for NYSE American Equities (formerly known as NYSE MKT Equities): - TargetSubID (57) – removed support for RET (Retail Order) - TradingSessionID (336) – added support all trading sessions - OrderCapacity (528) – removed support for Error Account - ExtendedExecInst (9416) – removed support for Add Liquidity Only; No Route to IOI; No Trade against MPL and No Route to IOI; Retail Order Type 1; Retail Order Type 2; Retail Provider; Imbalance Offset. Added support for Discretionary Peg; Dark Primary Peg - QuoteType (9478) – added support for Q-Order - ProactiveIfLocked (20002) – removed support for Proactive Trade Non Display Added Liquidity Indicator values and definitions in support of NYSE American Equities (Appendix). Added new Liquidity Indicators for both NYSE Arca Equities and NYSE American Equities – Add MPL Sub Dollar Execution; Add Non-Displayed Sub Dollar Execution; Remove Regular Limit IOC; Remove Sub Dollar IOC; Remove Sub Dollar MPL Order; Remove Non-Displayed Sub Dollar Limit Order. Updated the binary Order Types matrix in support of NYSE American Equities (link to the matrix in Appendix) – added Discretionary Peg Order and Dark Primary Peg order types.
February 23, 2017	1.4	Added the tag OrigSendingTime (122) to the FIX Header. Updated max length of the following tags to 20 characters (previously 32): - ClOrdID (11) - OrigClOrdID (41) - ParentFirmClOrdID (9451) Added descriptive detail to the following sections: - Failure Recovery – added sub-section Pillar Risk Mitigation; added detail

		- regarding next expected client sequence number on a secondary Pillar destination IP address, and after an intraday session restart - Pillar FIX Session Layer handling – regarding Pillar FIX Gateway handling of Resend Requests from the firm with MsgSeqNum greater than expected - Message Retransmission – regarding Pillar FIX Gateway responses to Resend Requests from the firm - Appendix: Pillar Reason Codes – regarding the text format of Reason Code 133 (STP Cancel) Clarification on values provided in the tag LastMarket (30). Added detail on validation of the tag Account (1). Added Pillar Reason Code 168 (Pillar Risk Mitigation) to Appendix. Added hyperlink and guidelines for interpretation of NYSE Arca Equities order type validation matrix to Appendix. Clarification that the tags MinPegQty (9563) and DiscPriceRng (9565) are not currently available for NYSE Arca Equities.
January 5, 2017	1.3	Removed the following tags: - Account (1), from Order Cancel Request - ClearingAccount (440), from Execution Report - Clarified valid values in Logon Request and Logon Response (MsgType A), tag RawData (96) for position 3 (Self Trade Prevention).
December 8, 2016	1.2	Added section, "Pillar FIX Session Layer Handling." Updated the following message types: - Order Cancel Request (MsgType F) – removed tag OrderQty (38). Updated valid values and description for tag Side (54) as used on a Bulk Cancel Request. Added details regarding OnBehalfOfCompID (115) - Order Cancel/Replace Request (MsgType G) – Added details regarding OnBehalfOfCompID (115) and SenderSubID (50) - Order Cancel Reject (MsgType 9) – added tags NanosecondSendingTime (20009) and NanosecondTransactTime (20010) Updated the following tags: - ClOrdID (11) – updated details about uniqueness validation - CumQty (14), LastPx (31), LastQty (32), LeavesQty (151) – updated minimum value to 0 - LastMkt (30) – updated to be conditional - SendingTime (52) and TransactTime (60) – updated format to be compliant with standard FIX 4.2 Protocol - TargetCompID (56) – added list of values - DeliverToCompID (128) – updated max length - ExecType (150) – added value M (Pending Modify) - AttributedQuote (20001) – removed values 2 and 3 from list of currently accepted values (descriptions remain; reserved for future use) - FlowIndicator (20005) – updated to be required; updated description Added Pillar Reason Code 166 (Invalid Permission for SenderCompID) to Appendix.
October 28, 2016	1.1	Added the following new tags to existing message types: - Text (58) – to Logout - DeliverToSubID (129) – to FIX Header - FlowIndicator (20005) – to Execution Report - UnsolicitedAckType (20007) – to Execution Report

		- NanosecondSendingTime (20009) – to Execution Report - NanosecondTransactTime (20010) – to Execution Report Modifications to existing tags: - ClOrdID (11) and OrigClOrdID (41) – updated max length - ExecID (17) and ExecRefID (19) – updated max length - HeartBtInt (108) – updated max length - ParentFirmClOrdID (9451) – updated max length - AttributedQuote (20001) – assigned tag number (previously TBD) - ProactiveIfLocked (20002) – assigned tag number (previously TBD) - CancelInsteadOfReprice (20003) – replaced RepriceOrCancel; assigned tag number (previously TBD); values updated - Updated "Req'd" status (Y, N, C) – various tags - WorkingPrice (20004) – assigned tag number (previously TBD); updated max length - WorkingAwayFromDisplay (20006) – assigned tag number (previously TBD) - ParticipantType (20008) – assigned tag number (previously TBD) Updated values for existing tags: - MsgType (35) - OrderID (37) – bulk cancel codes - SendingTime (52) - TransactTime (60) – updated timestamp format (standard FIX) - RawData (96) - OnBehalfOfCompID (115) - GapFillFlag (123) - DeliverToCompID (128) - ExecType (150) - SelfTradeType (7928) - LiquidityIndicator (9730) - Pillar Reason Codes – added 154 through 165; see Appendix Added/updated descriptive detail to the following sections: - Failure Recovery - Self Trade Prevention - FIX Drop Copies - Order Cancel Request - Heartbeat and Test Request - Message Retransmission - Sequence Reset - Session-Level Rejects
August 12, 2016	1.0	Initial version of the specification.